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RICHARD H. EDMONDS, President.
THOMAS P. GRASY, Vice-President.

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COPY FOR ADVERTISEMENTS.

**Advertising copy (changes or new
advertisements) should reach us
Saturday Morning to insure insertion
in the issue of the following week.**

**For the first issue in the month
we should receive copy by Friday
Morning of the week preceding.**

The Smith-Courtney Company, supplies and machinery, Richmond, Va., in a letter to the Manufacturers' Record says:

We certainly consider the Manufacturers' Record decidedly the best advertising medium in the South. We appreciate it more than any similar publication in the South.

A TARIFF FABLE.

A settler in Canada caught a gray wolf last winter. His first impulse was to kill the wolf, inasmuch as wolves had played havoc among his sheep. But a brilliant idea came to him. He had read that ships were sometimes cleared of rats by fastening a bell around the neck of one of them and turning him loose. Why should he not tie a bell around the neck of this wolf, turn him loose, and thus clear the neighborhood of wolves? No sooner thought than done. For a while nothing was heard or seen of the wolf. He was almost forgotten, and when the snow had melted, the settler turned his sheep and their lambs into the fields near his home. Presently the sheep pricked up their ears, and with a rush and with much bleating the whole flock ran into the woods. When the flock returned a lamb was missing. This thing happened several times, until members of the farmer's family were led to follow the sheep into the brush. They reported that they had distinctly heard the distant tinkling of a bell. Then it began to dawn upon the farmer that the bell which he had fastened to the neck of the wolf was the one that had been borne the previous summer by the bellwether of his flock, and that the quick-eared sheep, recognizing the sound of this bell and true to their instinct, had hastened to seek their leader. The conclusion of the story as told by the Galveston News is:

That they found not exactly a wolf in sheep's clothing, but a wolf attached to a sheep's bell and ready to take advantage of his position to dine on spring lamb, was no

fault of theirs, though certainly their misfortune.

Recent events in American politics convince one that this story of the wolf and his sheep's bell contains a moral which may be practically and profitably applied.

At intervals during recent years certain political bell-wethers wandering in the wilderness of innocuous desuetude have ventured from their banishment in efforts to rally their whilom flock. But the flock has been sadly astray. It has been ready to answer the signal from almost any kind of a bell. It has been scattered abroad, and has wandered from Dan to Bersheba in the search for pastures green. It has fretted itself almost to dissolution when all the while it might have gamboled beside its own still waters. In spite of its many vicissitudes, in spite of its trials and tribulations, it has not learned to forget, and its lambs have been taught no better. So at times it has rallied to the tinkling of its bellwethers, only to return to its wonted walks, shorn of fleece and bereft of members, old and young, even though it may have nibbled tender, juicy herbage for a while.

There had really been no necessity for this flock to wander so long. Its pastures had been luxuriant enough had they been tended carefully after the methods which had so successfully prevailed for other sheep, and had the results of modern thought been intelligently applied. Nay, more. Its pastures had long since become the attraction for other flocks instead of for comparatively few individuals. But these sheep would realize none of this. They refused to understand that time brings changes, and that a policy beneficial in a bucolic generation may, in the shifting of world economies and necessities, be harmful in an industrial era. So they still were delighted to be charmed by the rusty bell sounding a tariff for revenue or free trade.

In the meantime individuals of another flock have waxed lusty—so lusty that they require more abundant forage, and yet so indolent as a result of ease that they refuse to move to virgin fields. They begin to demand that their forage be brought to them, and that it shall be free of the cost necessary to keep other members of their flock in being and to prevent the particular pastures of the errant flock from running to waste lands. They are demanding that the latter shall once and for all sacrifice their spring lambs. They know that the errants must be fooled in order to accomplish their end, but they know that adherents to the doctrine that a political theory is as the faith once delivered to the saints may be easily fooled. Rapacity adapts itself to circumstances. It may not become a Canadian gray wolf, but it may adopt the lupine policy. So it sets a bell to tinkling. The bell sounds free raw material. Already the bell-ringer smells its mutton.

Moral: When members of a party

which has for many years maintained a policy under which American industries have flourished, begin, at a time when conditions demand an intensifying rather than a diminishing of that policy, to advocate measures which would cripple, if not destroy, the industries of great sections of the country, it is time for men of all parties in the whole country to call a halt. As long as the United States can, in the employment of hundreds of thousands of persons, produce the raw material—iron, coal, lumber, wool, sugar-cane or sugar-beets—in quantities sufficient for the needs of American industry, or, in temporary shortage of home supply, can afford to buy abroad without change of policy, so long should the demand for free raw material be as that of one who beatheth the air.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 54 and 55.

THE SCHEME TO ORGANIZE LABOR ON FARMS.

At a meeting in Atlanta presided over by the State organizer for the American Federation of Labor about fifty members of the general assembly of Georgia were present, and it was reported as "a significant fact" that gentlemen who represent the largest cities in the State were all outspoken in their enthusiasm for the child-labor bill now pending. It is difficult to discover any particular significance in the support of this measure by representatives of the cities of the State. In cities the full-knowing or unwitting supporters of the originators of the child-labor agitation, with its far-reaching intent, most do congregate, these supporters including those persons who are quick to turn to the advantage of their scheme any state of the public mind and the kindly hearts whose sympathetic emotions permit them to

view at one time but one phase of a social question. If the program, of which the child-labor agitation is but a beginning, should be carried to its projected finality, the day would dawn when a meeting under the auspices of the American Federation of Labor, intended to bring pressure upon a general assembly, would be attended not only by the representatives of the largest cities, but by representatives from rural districts; for the program includes not only the purpose, as voiced by the United Textile Workers, to have its interests represented in different branches of the local, State and national administrations of the government, but the purpose of the American Federation of Labor to extend its operations among agricultural laborers.

In his hearing before the industrial commission President Samuel Gompers of the American Federation of Labor said that he had very ardent hopes of organizing the farm labor of the country, "more particularly the farm laborers, the wage-earners on the farms," as

distinguished from the employing farmer. He said that farm laborers had been organized in Ohio and Indiana and in the Middle West, though very poorly, but he had hopes.

"Do you expect to shorten the hours of the farm laborer with other laborers at all seasons of the year?" he was asked.

"When the farmers are organized," he replied, "I have no hesitation in believing that they will formulate the propositions and the means by which relief can come to them. I believe that their hours of labor should be reduced. May I be permitted to say in connection with this that I know that the general notion of the farmer, of the employing farmer, is that you cannot finish the work on the farm unless you start in at sun up and work until sun down, and then work around the farmhouse or around the house and in the kitchen and in the barn. This has been the notion from time immemorial, that farming cannot be successfully conducted unless upon that basis. I know, too, though, that in other industries the same notion prevailed; but in conference with employers of labor of a trade that I have in mind they have admitted to me that the organizations of labor have convinced them that they can conduct their business without deterioration of their product and without injury, but, on the contrary, with economy and advantage, by reducing the hours of labor to nine and eight per day. * * * And while I have not any knowledge at all regarding farming, I have not the slightest doubt in believing that the present notion of the necessity of working the farmer from 4 o'clock in the morning until late in the afternoon, and then having to work around the barn and the house, is entirely a conception of the old times that would give way with the organization of the farmers in this country."

This brought from Senator Kyle, a member of the commission, the perfectly natural comment:

"In our country, which is chiefly a wheat-growing region, the farmers find their vast fields of wheat ripening practically at the same time, and they are compelled to run their machines almost night and day during the harvest season. Of course, after this is through they can take their vacations of several days or a month, when they have practically nothing to do, and they rest nearly all winter."

"That is very true," was Mr. Gompers' rejoinder, "but here is the same thing in industry. There are some plants requiring chemical processes which, for the sake of economy, for the sake of safety and the best results, are required to operate twenty-four hours; but instead of having the men working twelve hours or the whole twenty-four hours for a day or so, or instead of having them work twelve hours in two shifts, the effort of organized labor is to have them work eight hours in three shifts."

The ambitions of the American Fed-

eration of Labor as interpreted by President Gompers at this hearing have recently been signally exemplified at Sturgis, Ky., by that representative body of the American Federation of Labor known as the United Mine Workers. The Earlington (Ky.) Bee publishes a dispatch from Sturgis, which says:

Sturgis has for years been dominated by the Mine Workers' organization, and recently, flushed by victory, the unionists have attempted to extend their control of affairs and of men into every other branch of trade and business represented here; farm hands, teamsters, clerks, merchants they have attempted to coerce into organizations as allies of the union miners. Representatives of the Federation of Labor have been diligent—too diligent, it now appears. Merchants have been notified that their clerks and teamsters must get into the union if these merchants would hold their trade. The force of this threat is emphasized by the fact that the union miner handles a large portion of the total wages earned by the labor of Union county, and that his trade and that of his friends is a very considerable factor in the business of the community. The union miners and all others whom they persuade or coerce into organizations are obligated not to purchase anything except from a union clerk or a union merchant. The union miners are fined \$5 for each offense if they violate this rule, and now some are having a hard time finding a place where they can spend their earnings without subjecting themselves to this fine.

The unionists have carried their dictation and tyranny so far as to produce a revolt among farmers, merchants and others who had heretofore either sympathized with the miners or else only tolerated their dictation because the majority went that way. Numerous specific instances might be given of pernicious interference in trade. * * *

Out of this persecuting interference in the business of the community has come a strong organization of merchants and farmers to resist the aggressive dictation of the unionists. The association is now about 300 strong, with J. M. Stone, president, and Mr. Seagrave, secretary, and most of the best farmers and merchants affiliated.

Commenting upon the unwarranted interference on the part of the United Mine Workers, the Bee says:

Efforts have been made to organize all branches of labor there, and finally a concerted attempt to throttle all business not done by unionists or in strict accordance with their instructions, which requires that all employees of any business shall belong to a union.

A revolt has occurred. These business men and farmers have seen the danger of domination by the labor trust, which, if not combated, would not only control all trade, but could regulate the supply of labor and determine the wages to be paid therefor. They may also fix their initiation fees a prohibitive figure in order to shut out additional workmen and keep all work for a limited number, and they may, and often do in many places, prevent the employment of even the union men in good standing, when the owners of the business want and need additional labor.

Here is a situation which should set the representatives of the farming and other productive and employing interests of the South, whether they belong to the city or to the country, to thinking hard and to acting according to their best judgment. In most Southern States the farmers can control legislation. They should see to it that the program of the American Federation of Labor, which, in the words of President Gompers, regards the boycott as "inherently lawful" and the attempt of the courts to make it unlawful "as merely court-made law," and which has its logical outcome in such a state as that at Sturgis, Ky., shall receive no sanction of legislation.

Therefore, when the question of child labor in Southern cotton mills, agitated under the auspices of the American Federation of Labor, comes before the representatives of farmers in the Georgia legislature or in any other body, it should be borne in mind that the legislation sought is but a pre-

liminary step in the program of the American Federation of Labor, which would organize the employees of farmers and would regulate their hours of work, regardless of the effect upon farmers, just as it is seeking to regulate the business of cotton manufacturing and other industries.

One point gained by the American Federation of Labor and its allies in this campaign commits legislation not merely to the one act, but to the dangerous principle underlying it. That principle is socialistic, and if permitted to prevail will bring stagnation to the State.

Every Southern farmer desiring a condition where an agitator from Indiana or Massachusetts may at any minute order the employees upon his farm to quit work, regardless of the season's demands, or may limit him in the use of his reaper, his threshing machine or his gin, ought by all means to urge his representative in the halls of legislation to support the child-labor bill.

The Southern Farm Magazine.

In the November issue of the Southern Farm Magazine the point was made that the annual gathering of the Farmers' National Congress at Macon, Ga., would prove to be a potent means of calling attention of Northern and Western farmers to the agricultural opportunities of the South. That the point is to be sustained by facts already appears in the candid expressions of opinion from representative members of the congress regarding conditions in the South and the great opportunities there for farmers from other sections. Some expressions of the kind are published as a feature of the December issue of the Southern Farm Magazine, and they will be found of great interest to readers in all parts of the country. Other leading papers are by Mr. R. B. Blackburn, a member of the Georgia legislature, on his proposed patrol law for Georgia with special reference to remedying certain ills of the rural districts, by Mr. Paul Scherer on farming in Virginia, by Mr. R. L. Bennett on alfalfa, and by Mr. M. V. Richards on the work done in recent years for immigration to the South.

The Southern Farm Magazine is published monthly by the Manufacturers' Record Publishing Co., Baltimore. Its regular price is \$1 a year, but in its December issue is made the offer for a limited period to new subscribers of a rate of 25 cents a year.

The National Hardware Association, in session at New Orleans, elected last week the following officers: President, R. A. Kirk of St. Paul; first vice-president, John C. Knock of Milwaukee; second vice-president, Bruce Hayden of San Francisco; secretary-treasurer, T. James Fernley of Philadelphia; executive committee, Samuel A. Bigelow of Boston (chairman), John C. Freeman of Detroit, P. E. Strauss of Boston, J. D. Moore of Birmingham, R. M. Dudley of Nashville, Tenn., and W. S. Right of Omaha. The American Hardware Manufacturers' Association, in session at the same place, elected the following officers: President, Fayette E. Plumb of Philadelphia; first vice-president, F. S. Kretinger of Fort Madison, Iowa; second vice-president, J. B. Birge of St. Louis; third vice-president, George W. Corbin of West Park, Ohio; secretary-treasurer, F. D. Mitchell; executive committee, Robert Garland of Pittsburgh, N. A. Gladding of Indianapolis, W. S. McKinney of Allegheny, Pa.; H. C. Holt of Cleveland, F. L. Clark of Birmingham, Ala.; G. W. Landers of New Britain, Conn.

INCREASING USE OF BITUMINOUS COAL.

By F. E. SAWARD.

(Written for the Manufacturers' Record.)

Never before has the bituminous coal trade of this country been given such an impetus as during the past few months, while the strike was on in the anthracite mines, and that impetus seems to be likely for the future, for there is still a demand for this grade of coal, and prices, while not as high as they were, are really remarkable when one considers the figures at which this grade of coal was sold only a few years ago. Truly, as Senator Elkins recently said, coal land is better than real estate in New York, and every railroad property is reaching out to secure property for its own use and for commercial use. It is not unsafe to say that when the returns are in for the year 1902 the total will show a production of bituminous coal four times as great as that of anthracite, and when one considers that it is not so many years ago—in the life of an industry or of a country—that they were on an equal footing so far as tonnage is concerned, this statement must have a great bearing upon the situation.

The trade keeps up to the highest pitch of activity, and the cry of short car supply is already heard throughout the country, and it is the same story from all directions, the one significant fact being that the railroad companies are and have been large buyers. They are taking the maximum tonnage allowed by their contracts, and some have been buying in the open market, thus preparing for the winter, and possibly acting on their knowledge of an insufficient car supply. There is in the district tributary to the tidewater market much difficulty in getting the coal forward, and to this cause must be attributed the continued high prices, which seem to be about \$3 at the mines for line delivery in Pennsylvania and \$2.50 at other places where the people have no contracts, but can take advantage of the demand for coal. But even in these places, on account of the difficulty in getting forward coal and the uncertainties of the situation, shippers are chary in quoting rates on any considerable business.

It is the same story with those shippers who send to the lakes; car shortage and slow movement is more in evidence now than at any time within the shipping season, and the disturbance to the steaming and orderly shipping of coal is distressing, causing irregular operation of mines and great annoyance to shippers, railroad managers and consumers. One gets the most urgent reports as to the demand for coal from the eastward, where the market is very short indeed, comparing this year with last, for it must be remembered that the anthracite tonnage is about 16,000,000 tons behind that of last year, and while the excess amount of soft coal which has been mined has helped make good a part of this shortage, yet it has not done so in its entirety, which insures, as stated before, a heavy demand for coal for months to come, and therefore prices delivered alongside at Boston are from \$5.50 to \$6.50 per ton, according to the urgency of the occasion.

The demand for coal at New York harbor ports appears to be fully up to the receipts, and the market has been very steady at around \$5 delivered. There is a conflict between Baltimore & Ohio and Pennsylvania Railroad coal where both can be delivered, and the quotations on the former are in some instances distancing the latter. The car situation on the former is about as bad as on the latter road, and shippers over both systems are puzzled to know what steps to take to

bring about an improvement in the movement. The shortage of cars and motive power on all the roads tapping the Monongahela and Youghiogheny valleys is greatly embarrassing the orderly production of pig-iron, and the determination of the principal producing companies in the Connellsville coke region to assume no contracts except with the underlying companies of the United States Steel Corporation is making the furnace masters look about for a supply of coke for the coming season. Coke contracts for next year continue to be made, but so-called independent companies are asking \$4 for furnace coke at ovens, while foundries are paying \$4.50 to \$5 on contracts for the first half of 1903. The very heavy tonnage of rails, plates and shapes booked for next year and the evidence that the railroads will be as busy in rehabilitating their lines in 1903 as they have been this year are still the backbone of the iron and steel situation, and the extensions under way will help to make towards a continuance of the prosperity the country has been enjoying during the last few years at least. We read that in some instances furnace operators have found it necessary to hire special trains to get their coke supplies forward. Is it any wonder that in view of this condition of affairs there is such a development of coal land throughout the western part of Pennsylvania, the Virginias and other Southern States?

The industry of coal mining and distribution has taken on somewhat of the proportions of statesmanship, requiring broad views, large ideas and foresighted vision, and the change, as against even a few years ago, is most remarkable. Business is conducted on so colossal a scale that small and narrow-minded men are not in the reckoning when it is to be directed under the impulses of the new economic conditions that have developed with such marvelous rapidity, and that are pushing men forward faster than they desire. A large working capital, a ratio of profit that permits of paying dividends and at the same time adding to the value of the property, with careful attention to new developments in the forms of using fuel and the important changes therein, leave the directing minds of the large corporations small time for idleness. All the changes in fueling forms receive close and studious attention, and the fact that all populous communities now demand abatement of the smoke nuisance by legislative enactment is not being ignored.

The production of coal in the world is now in the hands of the United States, Great Britain and Germany, and during the last few years we have distanced these last two countries, and shall maintain our position in spite of the fact that there was considerable time lost in the anthracite mines this year, for in some of the bituminous districts the production has increased 10 per cent., while in others it has shown even a larger increase. We are learning not only to be saving in the amount of coal actually bought for the purpose of burning, but we are learning to burn coal with greater economy, and bituminous has shown its value in many places during the past year. It is stated that in New England manufacturing establishments the economy of fuel has reached 50 per cent. within the past twenty years, and that is largely owing to the change which has taken place, for the statistics for the port of Boston show that twice as much bituminous is now re-

ceived there annually as anthracite, whereas a few years ago they were on an even footing. It is the growth of the mining machine used in bituminous mines in this country which has enabled the bituminous production to increase as it has, so that in the ten years from 1891 to 1901 the machine-mined product increased from 6,000,000 tons to nearly 60,000,000 tons, and as the use of these machines is greatest and the progress has been greatest in the central group of States, as well as in West Virginia, it is clearly evident that from those places is the greatest output of coal likely to come, and at a rate which will afford the opportunity for disposing of the product of the mines on a fair basis of cost; for note that in West Virginia, where the machine-mined coal was 205,000 tons in 1891, it was increased to 4,800,000 tons in 1901, and it is no doubt this which put that State in third place last year, and Illinois was only 3,000,000 tons ahead, so it is not unlikely that when this year's returns are made up the Mountain State will occupy second place in coal production in this country, for with such developments going on in the Fairmont and in the Norfolk & Western districts, such an increase is easily made up.

Taken all in all, the prospects for the bituminous coal trade of this country are the brightest, for with the industrial condition as it is and likely to be, and the source of fuel supply of these industries being bituminous coal, the situation cannot be otherwise than as stated.

Ready to Furnish Steel Rails.

The Tennessee Coal, Iron & Railroad Co. announces that it is now prepared to furnish basic open-hearth steel rails for both prompt and future delivery, having recently started up the new rail mill at Eusley. This is a very important step in the advancement of the iron and steel interests of the South, and the progress of the company in the development of its steel-rail business will be watched with great interest.

An International Warehouse.

In an interview at New Orleans Col. Jerome Hill of Memphis announced that a company capitalized at \$3,000,000 is to be organized to build and operate at New Orleans an international warehouse. Colonel Hill said that it is proposed to make the company so strong that its warehouse receipts will be negotiable as collateral in the banks of this country and Europe. He said that the plan would permit cotton to be stored at New Orleans instead of sending it to Liverpool or other foreign ports for distribution to the marts of the world. He added:

"The progress of our country has enabled New York to become one of the first moneyed centers of the world; Chicago dictates the price of grain and provisions that feed man; Pittsburg dictates the price of iron and coal that move man, and this move is to make New Orleans the greatest cotton market and distributor of that product that clothes man. We will then have what goes to make all of commerce, to wit, what moves, what feeds and what clothes mankind. This is commerce, the balance is but the outside show."

N. J. Stein, S-to Jerska 16, Warsaw, writes to the Manufacturers' Record that he would like to arrange for American manufacturers a permanent exhibition of novelties in his city.

Ernst Piepkorn, No. 4 Fabelsderferstrasse, Stettin, writes to the Manufacturers' Record that he is interested in the handling of all kinds of cotton, silk and sisal waste.

THE RAILROADS AND THE PEOPLE.

Some Sidelights on John Skelton Williams' Speech at New Orleans.

By THOMAS P. GRASTY.

[Written for the Manufacturers' Record.]

When John Skelton Williams was addressing the bankers' convention at New Orleans on the regulation of combinations of capital he was perhaps all unconscious of what a "fetching" advertisement he was giving his own railroad, for when a man who has himself been a somewhat successful consolidator of railroads and a not altogether unskillful combiner of capital, and who is withal at the head of what, less than ten years ago, would have been the very largest corporation in the South—when that kind of a man comes out before a convention of the representatives of the "capitalistic classes," unequivocally advocating the popular side of the most intensely interesting question of the hour, there is sure to ensue no end of talk about what he represents.

This address, however, will do a great deal more than to advertise the independence of the Seaboard Air Line. Excellent in many respects, it is liable to be misunderstood by some who will read it in its entirety. It is still more liable to be misunderstood by those who may happen to read only garbled extracts from it. This is to be feared even in regard to what may be called the academic part of it—that relating to the regulation of combinations of capital, and is even more to be feared in respect to that part of it which sounds such a fearful note of alarm concerning the recent consolidation of certain Southern railroads.

In his general discussion of the question of combinations of capital and the relations which ought to be maintained between the corporation and the public, the position taken by Mr. Williams, though at first blush one that would be pronounced decidedly "anti-trust," will be found upon close analysis neither unsound nor at variance with the views of other far-seeing financiers and capitalists; in fact, eliminating a few phrases which savor of emotion, the main conclusions of this part of the address are such, I doubt not, as men like Mr. J. Pierpont Morgan would be inclined to endorse. The following sentence, for instance, I am sure well expresses the sentiments of all our really great captains of finance: "The business of the corporation, of the trust company, of the bank—of every combination of brains and enterprise—is to give the public good value for fair returns."

It is also probable that most of the heads of the great combinations of capital which the economical development of the country's resources has necessitated will concur in this sentiment: "When we cease to be the servants and partners and associates of the people from whom we draw our living in return for our investments of money and expenditure of thought and energy, and undertake to be the masters of the people and despots, demanding blackmail from them, we forfeit our claim to respect and sympathy and invite vengeance."

Of course, there may be a few of those who control large holdings in the corporations of the country who, while willing to be the people's "partners and associates," will be a little loth to admit the necessity for occupying the position of "servants" to the people. But that is an unessential detail in the general proposition that the people must be dealt with fairly, and not oppressively.

That the majority of the great capital-

ists of the country are opposed to those methods which Mr. Williams so forcefully condemns I have good reasons for believing. By a sort of accidental drifting into an inquiry on this score I became long ago convinced that the general welfare of the people was of even more concern to those whose entire wealth consists of shares in large corporations than to the average business man or farmer of moderate means.

It is very reasonable and in accord with the promptings of common sense for a man whose holdings of railway shares is as large as Mr. Williams' to be very deeply concerned about the prosperity of the people who support railways. I am sure Mr. J. Pierpont Morgan, who is credited with being the largest individual holder of the securities of those railroads which depend for their profits on the prosperity of the people of the South, is keenly alive to the importance of doing all that can consistently be done for enhancing the prosperity of the Southern people. It is well known that since Mr. Morgan became the power behind the management of the Southern Railway system the very liveliest kind of interest has been manifested in ways and means to promote the public welfare. Prior to the consolidation of the dozen or so ill-equipped and wretchedly-managed lines that today constitute that great system it was very difficult to get any sort of railroad co-operation in the work of Southern development. The excellent results produced through the maintenance of the industrial department of that company, with so enthusiastic and efficient a worker for the South as M. V. Richards at its head, furnish one instance—and similar instances might easily be pointed to—of how that particular railroad is the people's partner and ally, and not the people's enemy.

The fact is, it would be difficult to find many cases indicative of a disposition on the part of the owners or managers of the railways of the section which Mr. Williams' railroad serves to act the part either of "masters of the people or despots." And in voicing such an intimation (if, forsooth, it was meant as an intimation) Mr. Williams allowed his feelings rather than his intellect to do his phrasing. However, as has been said, that was merely an incidental feature of a very strong presentation of the duties of our larger corporations to those from whom they "draw their living"—to wit, the people.

Nevertheless there was probably a ripple of surprise when the president of the Seaboard Air Line took occasion to utter such emphatic words as these: "As one identified with trust-company and banking interests and with railroad interests, and as chairman of the trust-company section of the American Bankers' Association, I say to you that the power of money ought to be restrained and the power of corporations controlled."

If he had not previously admitted the economic necessity for combinations and aggregations of capital, the foregoing, and, in fact, several similar utterances, would have had a tendency to befog the minds of a great many people who are honestly studying the so-called "trust" question, and to intensify that feeling of hostility to all sorts of corporations which is, alas, so prevalent among the unlet-

tered and untaught. However, it cannot be charged that Mr. Williams was altogether against fair play to combinations of capital after prefacing his whole speech with this declaration: "To the accomplishment of wise and proper economies, to the development of efficiency in service and the promotion of the public convenience and comfort combinations and aggregations of capital are right and should be encouraged."

But the most serious feature of this remarkable speech was the sounding of a very solemn note of warning, for which, let us devoutly hope, there exists no real occasion. "At this moment," Mr. Williams said, "it is charged that the commerce and prosperity of the entire South are threatened with the blight and oppression of vast railway associations which are attempting the placing of the control of the entire system of railway transportation in the keeping of one man or set of men and at the mercy of one interest, which may be guided by this or that impulse, which may demand that our business shall be developed or depressed."

From what has been said on the subject of the recent railroad alliances by men who are not liable to be biased or influenced by virtue of interest in parallel or competing lines, I am inclined to believe that the people of the South may feel serenely confident that there is no real danger of the "blight and oppression" which has been predicted, nor that the "one man or set of men" said to control this immense mileage will ever be moved to demand that our business shall be "depressed." And why? If for no other reason, because "any man or set of men" with brains enough to acquire such vast power will not be foolish enough to "kill the goose that lays the golden egg."

As a matter of fact, there are wise and clear-headed people of my acquaintance who are looking forward, as a result of the recent close association of most of the larger railways of the South, to a repetition of the marked improvement already alluded to as having followed the merger of the various lines which made up what is now the Southern Railway. In other words, there is good reason to expect the inauguration of new methods for developing the resources which will increase traffic, and in doing this the public will be in great measure the beneficiary.

Again, there are those who take the ground that the Seaboard Air Line will flourish more than ever, since such tremendous aggregated forces may be relied upon to work together in developing the South, because as the South prospers so must the Seaboard prosper.

Finally, the universal human tendency to come to the rescue of the "under dog" will constitute a safeguard against any harm to the Seaboard through any possible combination of railroads that has been formed or that can be formed.

Leading articles in the December issue of Cassier's Magazine of illustrated engineering are: "Gold Mining in Egypt—Some Data of Ancient and Modern Exploration," by Charles J. Alford, F. G. S.; "American Petroleum Possibilities," by George E. Walsh; "The Mechanical Inventors of Lancashire—Their Influence on Some British and Foreign Industries," by Sir W. H. Bailey; "Locomotive Types of Great Britain," by J. F. Gairns; "Water-Power in Electrical Supply," by A. D. Adams; "The Engineer as Financier," by Dr. Robert H. Thurston; "Power From Lake Superior—Electricity From the Rapids at Sault Ste. Marie, Mich.," by H. Von Schon; "Lubrication of Textile Mills," by William F. Parish, Jr.

BIRMINGHAM: VISIONS BECOME SOLID REALITIES.

[Special Correspondence Manufacturers' Record.]

Birmingham, Ala., November 24.

In attempting to give any just description of conditions in Birmingham today, only superlatives will fit. Think of a city of 100,000 very busy and prosperous people, where thirty years ago there was not even a cross-roads postoffice, and a beginning of the marvelous story has been made. Then consider that \$100,000,000 worth of business is transacted here in a year in mining, manufacturing and merchandising, and that there are 50,000 wage-earners here, requiring a pay-roll of on towards \$3,000,000 every month, and some conception may be gained of the all-pervading prosperity which one sees on every side. The Birmingham of today is a realization of the visions of the enthusiasts, who, with prophetic eye, foresaw that nature's wonderful bounteousness would inevitably create here a great iron and steel industrial center; that having iron ores on one side—enough, too, to last a thousand years—and equally rich coal mines on the other, easily accessible and in some cases not a stone's throw distant, while between lay incalculable beds of limestone—would make possible the production of pig-iron at a cost lower than it could be made anywhere else. The early Birmingham was the dreamer's paradise. As in the Mikado, seeing that conditions must come, they were considered the same as if already present, and the traffic in town lots went furiously on. It is a well-rehearsed tale of how the old Elyton Land Co. paid dividends of \$4000 or \$5000 a share, and the boom in Birmingham was a household word and an incentive to speculation everywhere. Real-estate fakirs seized on the furnace idea as the most alluring bait to land the public, and a furnace, or a promise of one, became the basis of a speculative craze which swept the entire Southland.

When Birmingham reached the end of the speculative rope, as even the greatest of cities must do sometimes, the boomeraded away, and some speculators who were spread out pretty thin passed under the rod; but Birmingham itself went steadily forward to the fulfillment of its destiny. Out of the wreck of paper fortunes and the disturbed conditions which generally prevailed strong men emerged with the destinies of the city in their grasp, and today no city in the country is on a more substantial and enduring basis. Indeed, it is the universal belief that the Birmingham of today is in reality only the solid foundation of the city that is to be, and that to the millions of money now engaged in making and marketing the raw materials of coke, iron and steel there will be added even greater millions engaged in making up the finished product, till Birmingham becomes a veritable Pittsburgh of the South.

The history of Birmingham is the story of the evolution which goes on in slightly varying form everywhere. Crude materials, easily produced and cheaply marketed, first engaged the attention of investors, and diversification, with the greater investment and higher skill required, followed after in slow succession. This evolution has been going on here until now the field of pioneering opportunities is largely occupied; there are few of the many thousands of acres of the best ore lands now held outside the older and well-established companies, and the necessities of the situation, as well as the attractive opportunities for profitable operation, will induce capitalists who come hereafter to put their money into all forms of manufacturing enterprises. There are still openings for raw material

men in the coal fields of Alabama, which, it is estimated, contain enough available coal to last 12,000 years, mined at the rate of 30,000 tons day, and coal and coke will doubtless be produced for shipment in greatly-increasing quantities for an incalculable period. But with the production of the iron mines it is a different story. There are twenty-five coke furnaces in blast in the Birmingham district, and the product of pig will this year approximate 1,500,000 tons. There are already a big steel works here, and there are some machine shops and some pipe works and a steadily-growing number of factories using the product of the furnaces. But the quantity of pig shipped away is so vastly greater than that consumed at home that there can hardly be said to have been more than a mere beginning made in the line of diversified manufacture. Birmingham pig is shipped to Moline for the plows the Southern farmers use; Birmingham pig goes to Chicago for the harvesters which are sold all over the South; Birmingham pig is bought in Pittsburg for the bathtubs which furnish Southern hotels and homes, and even in such rough and heavy materials as radiators, to say nothing of cotton-mill machinery and engines and boilers, the freight is paid on Birmingham iron and then paid on the product to be shipped back. Birmingham is admirably located as a shipping point, and is provided with the great railroad systems of the South and Southwest—the Frisco, the Southern and the Louisville & Nashville—and within a few months it will have the Seaboard Air Line. Then the Warrior river is twenty miles away, and with the improvements to be made by the government, will provide a water route to the Gulf for the shipment of bulky materials. Birmingham is every day becoming supplied with a greater amount of skilled labor, and the sons of Southerners are awakening to the importance of technical training in a way which is full of promise. Strung along the valley, on each side of Birmingham proper, for an extreme distance of twenty-five miles, are a dozen or more industrial towns and villages, all a part of the Birmingham development, and it is merely a question of years—and probably not many of them at that—when this whole valley will be occupied with every kind of industry which can be advantageously located near the supply of coal, iron and steel—and, for that matter, of wood, too, for hardwoods and pine are abundant all about Birmingham, and the possibilities for woodworkers are conspicuously great.

A description of all the interests centered in the Birmingham district is a formidable task. Even the Commercial Club, in the literature which it supplies to inquiring thousands, has to be content with an enumeration of only the greater undertakings here, and when the local newspapers print an industrial review the material supplied would take a week to read. Even the figures are staggering in their immensity, and to get anything like an adequate idea of what Birmingham really is one must come here and spend weeks in a personal visit to the plants. Here are conducted the main operations of the Tennessee Coal, Iron & Railway Co., the greatest concern in the South, with over \$36,000,000 capitalization, with 12,000 men in its employ, and with a pay-roll of over \$400,000 a month. The company owns over 440,000 acres of mineral and other lands, has twenty blast furnaces with a daily capacity of 2000 tons, has a rolling mill, has a steel plant with ten basic open-hearth furnaces and

a 44-inch blooming mill, and it has just begun to make steel rails. Furthermore, the Tennessee Company is preparing to spend \$1,500,000 in improvements, in providing more modern machinery and methods, and in enlarging the capacity of its furnaces, some of which will be doubled. Five of the company's furnaces are located at Ensley, a nearby suburb, which now has some 10,000 inhabitants, and which was a corn field a few years ago. Here is the steel plant and the steel-rail mill, and here is a wire and nail plant owned by an independent company. At Ensley is also the most interesting plant of the Semet-Solvay Company, a by-product industry, which extracts ammonia, creosote, pitch, tar, etc., from coal, even utilizing the smoke, and furnishes a resultant coke to the Tennessee Company hot from its ovens. Here is one of the cement works of the district also, which utilizes furnace slag for its product.

The Tennessee Company also owns five furnaces at Bessemer, the extreme southwesterly suburb in the Birmingham group. Here is the Tennessee Company's rolling mill and various other industries, among them a pipe works which casts a pipe up to seventy inches in diameter. The Sloss-Sheffield Steel & Iron Co. comes next to the Tennessee Company in size, and is one of the oldest in the district. It has two furnaces in Birmingham and two in North Birmingham, besides three at Sheffield and Florence. About 6000 men altogether are on its pay-rolls. The Republic Iron & Steel Co. has three furnaces at the suburb of Thomas. The Alabama Consolidated Coal & Iron Co., with headquarters here, has large mining and coking plants nearby, though its furnaces are at Ironaton and Gadsden, and others are the Woodward Iron Co.'s two furnaces at Woodward, where the company's own railroad brings the coal from one end of the line and the iron ore from the other; the Tutiler Coal, Coke & Iron Co. at Vanderbilt, one; the Laceey-Buek Iron Co., Trussville, one, and the Williamson furnace in Birmingham.

Out of the 2,180,625 tons of coke produced in Alabama in 1901, Jefferson county, the Birmingham district, produced 1,824,141, having 5211 coke ovens, to 7086 for the State. Alabama's coal output was 8,971,617 tons, and it is expected to go to 9,500,000 this year. The iron-ore supply of the Birmingham district is derived principally from the red fossiliferous ores of Red mountain, which carries a vein about twenty feet thick for a distance of ten miles northeast and fifteen miles southwest of Birmingham. Some of the slopes in the district have been driven down about 1100 feet without showing any deterioration in the quality of the ore or diminution in the thickness of the vein. The production of iron ore in the State for 1901 was about 2,900,000 tons, 90 per cent. of which was mined in the Birmingham district.

It is stated that there are in Jefferson county more than 300 mining and manufacturing plants of various kinds, including 27 blast furnaces, 5211 coke ovens, 55 coal mines, a number of extensive ore mines and stone quarries, and 2 steel plants, 3 rolling mills, a wire, rod and nail mill, a steel-rail mill, a steel-casting plant, a by-product plant, a wrought-iron plant, 2 cast pipe and foundry plants, 2 soil-pipe plants, 1 clay-pipe plant, 2 cement factories, 2 cotton factories, 2 cottonseed-oil mills, 1 chemical works, 1 knitting factory, 1 fertilizer factory, 1 corn mill, 1 flour mill, 5 ice factories, 2 breweries, 2 brass foundries, 1 paint mill, 1 overall and clothing factory, 1 furniture factory, 1 box factory, 1 gas and gasoline engine works, 1 iron and steel bridge works, 2 boiler works, 6 extensive

foundries and machine shops, 1 stove foundry and a number of small foundries, 3 important railroad shops, 3 sash factories, 2 wagon factories, 1 agricultural-implement works, 3 printing and book-manufacturing concerns, 1 hollowware plant, 20 brick plants, 10 planing mill and wood-working plants, 1 gas plant, 1 electric-light and power plant, 1 packing company, and various smaller industries. During the twelve months ending May 1, 1902, 124 new corporations were organized in Birmingham, with a capital of nearly \$9,000,000, and extensions, enlargements and improvements were made to old companies amounting to over \$4,000,000. And yet there are a hundred lines in which Birmingham has no representation. Just by way of suggestion, for it is not contended that the list is anywhere near a complete statement, Secretary Gibson of the Commercial Club prints this array of "long-felt wants":

- Basket and woodenware factory.
- Carpet factory.
- Casket factory.
- Chair factory.
- Chain works.
- Cordage factory.
- Canning factories.
- Glass factory.
- Hardwood mantel factory.
- Knitting mills.
- Malleable-iron works.
- Furniture factory.
- Spike factory.
- Frog and switch factory.
- Spoke and handle factory.
- School-furniture factory.
- Shoe factory.
- Shovel factory.
- Showcase factory.
- Tannery.
- Trunk factory.
- Trunk-slat factory.
- Tool factory.
- Wagon factory.
- Woolen mills.
- Woolen yarn mill.
- Horseshoe factory.
- Maul and sledge factory.

Only about three of these lines are represented here at all, and all of these are small concerns. It will be noted that there are but two cotton factories in Birmingham, and indeed Birmingham is seldom thought of in connection with cotton-mill possibilities, and yet over 100,000 bales of cotton are marketed here every year.

In examples of what has been accomplished in Birmingham are promises of future possibilities. While it is true that no such chances as have occurred in the past will appear again in a real-estate way, when men got a lot for \$50 that is worth \$100,000 today, yet in the industrial and commercial growth which is to come it is undoubtedly true that many who are starting in today in a small way may duplicate the successes of those who have shown the way. One substantial manufacturing company started a business employing twenty-five men, and now has 150 on its pay-roll; another started with twenty, and now employs 150; another began with six men, and now has 250 steadily at work; still another company started later with seventy-five men, and now needs 200.

One leading mercantile firm started business with six employees, and now carries on its pay-roll 100 names. Another mercantile firm began business with twelve employees, and it now requires 325 to attend to the different departments of its business.

One coal operator began business with a handful of miners, and has in a few years developed a mining and manufacturing business which gives employment to 1500 men, while another mining and manufacturing company has increased

1 stove foundries, ash factories, agricultural-imperial book-manufacture plant, and wood-electric company.

During 1901, 1902, organized in early \$9,000. And in which on. Just not con- tinue near a ribbon of array of

y. the number of its employes from a few hundred to more than 4000, and still another has increased its business from time to time until it now requires about 15,000 to handle all the different branches of its business throughout the district.

Real-estate prices keep up; they are certainly not less than in the boom days, but speculation has ceased to be the chief business of a large part of the population, as it was then. Now real-estate operations are rather behind than ahead of the demands. Birmingham has built up wonderfully in the past five years, and has many handsome and modern public and business buildings, as well as churches and homes. But there are still many relics of an earlier age in the principal business streets of the city, and when the first skyscraper was put up a few months ago the public was so anxious to get into comfortable quarters that the entire place was occupied before the elevators began to run. Now another skyscraper is under way, and all the space has been rented months before it can possibly be completed. From over-recklessness Birmingham appears to have swung strongly to conservatism, and talk of "boom" is looked on now very much as would be an alarm of fire. Possibly the influence of the manufacturers has much to do with this change of sentiment. They want the lands and lots to remain rather cheap than otherwise, so that workmen will find this an attractive and reasonable place to live. Doubtless the upbuilding of the many suburbs in this district was largely due to the overbooming of land prices in the city proper. While it is, of course, true that in the long run it makes a good deal of difference to a workman whether land and rents and living come high, yet at the present time such things appear to cut small figure in Birmingham. A retail merchant who recently removed here from a Northern city relates his amazement at the number of ten, twenty and fifty-dollar bills he takes in from his customers, many of whom come in with a dinner pail on their arms and wearing an undershirt and overalls, but demand the best to be had in the store.

With excellent transportation facilities already, Birmingham is to be even better supplied. The 'Frisco Railroad, which, under the energetic and broad-gauged direction of President Yokum, is doing so much for the development of the Southwest, is carrying out plans of far-reaching character and great benefit to this entire district, as well as to the business of the road itself. The present Kansas City-Birmingham branch of the 'Frisco was early completed into Birmingham, and has been an important feeder. Now the 'Frisco owns the Belt Railroad here, which it recently acquired, and which, with improvements under way and additional terminals purchased, will represent an investment of about \$1,000,000. The road when bought was about ten miles long. Some two miles additional track will be laid, and the 'Frisco will be given excellent connections with all the roads here. As in many other important industrial centers, there has lately been a congestion of freight traffic here, and it is heralded with much satisfaction by the newspapers that the 'Frisco, through its Belt Line, is co-operating with the trunk lines to break the freight blockade. This evidence of cordial relations with the trunk lines is viewed with much satisfaction by the business men of Birmingham, as indicating that the Belt road is to be made a terminal system in the fullest sense of the word, and it is expected in the course of time to do a large part of the switching business at this point. In the greater number of instances the use of the team tracks of the Belt road

costs the consignee nothing, as the 'Frisco system absorbs all switching charges on business in and out over that system, and the other roads pay the switching charges whenever the shipments are from competitive points, as is about 90 per cent. of the business into Birmingham.

Another important railroad enterprise for Birmingham is the advent of the Seaboard Air Line, which will build into Birmingham without delay. This important independent line has bought yard room here, and has secured all the right of way except a small stretch outside the city. There are no obstacles of importance to overcome, and it is expected that trains will be running into Birmingham within a year.

ALBERT PHENIS.

BIRMINGHAM'S BANK INTERESTS.

As might be expected, the banking interests of Birmingham are expanding in a large ratio, the deposits having grown from \$3,500,000 in May, 1898, to \$9,251,820 on May 1, 1902. The clearings increased from \$23,777,899 in 1898 to \$48,029,007 for 1901. The capital and surplus of all the banking institutions of Birmingham foot up about \$2,000,000. Leading the list is the First National Bank, W. P. G. Harding, president, which has deposits aggregating about \$4,000,000, the highest of any bank in the South outside of Louisville and New Orleans. The capital of the bank is now \$300,000, 500 shares, par value \$100, having been issued in September. It is significant of the esteem in which the bank is held that though the stock was offered at \$250 a share, \$150 premium, the issue was over-subscribed 3 to 1. The surplus and profits of this bank amount to \$330,000. The growth of this bank has been in keeping with the development of Birmingham, and it is an institution which carries the accounts of many large corporations, with many of which its directors are identified.

A FINANCIALIST'S VIEW.

"Everything in Birmingham and in the Birmingham district—and by that I mean the territory for 100 miles around, from which Birmingham draws its trade—is in excellent condition, and the banks are keeping pace with the development," said President J. B. Cobbs of the Alabama National Bank. "For instance, the deposits of this bank were \$500,000 or \$600,000 eighteen months ago, while now they are about \$1,400,000. There has been little increase in banking capital recently, but the present facilities are sufficient to take care of the necessities of the bank's customers. There is every indication that the present activity in coal, iron and furnace products will keep up for some time to come, the demand being ahead of the supply, and the furnace products being sold for months ahead. Birmingham is on a solid, substantial basis of development, and never has offered better opportunities to capitalists."

Mr. Cobbs has long been identified with the banking interests of Birmingham, and was manager of the clearing-house during the panic of 1893, when it required skilful maneuvering to weather the storm.

LIGHT, HEAT, POWER.

Visitors to Birmingham will be at once impressed by the character of the street-railway service, which, in point of equipment, accommodations, excellence of track and adequacy of power, compares favorably with that of any city in the country. The Birmingham Railway, Light & Power Co. owns all the street railways of Birmingham and the district, some 100 miles of line being operated, and it also owns the electric and gas lighting franchises. An example of how much consideration this company treats its customers with is furnished by the fact that

it has voluntarily reduced the price of gas from \$1.48 to \$1 per thousand. In all other respects it has more than kept the promises made when a consolidation of the street-car companies, electric-light and gas plants was effected some months ago. About \$1,750,000 is being expended in new and high standard track, a new power-house, new vestibuled 40-foot cars and in other improvements. The cars are equipped with air-brakes, push-buttons and all other conveniences of the latest type, and are not surpassed in comfort by the cars of any line anywhere. The company has taken over the lighting plants of the villages in this district, and is supplying the public of this section with lights as well as an improved street-car service.

Another most progressive step is in the installation, now beginning, of a steam-heating plant, by which residents and office buildings may be supplied with heat from a central station, utilizing the exhaust steam from the company's power station. Such an undertaking has been announced in a few of the Northern cities, but it is the first instance of the kind in a Southern city, and is another evidence of the spirit which animates Birmingham's Railway, Light & Power Co. When the plant is in full operation the heat for a house may be turned on as easily and quickly as the electric lights, and there will be no bother with furnaces or stoves. The comfort and convenience of living in Birmingham will thus become proverbial, for it surely is a rare privilege to have the heat of one's residence on tap, as it were, for use at any time desired.

TYPICAL IRON DEVELOPMENT.

An excellent example of the substantial latter-day development of Birmingham is furnished in the case of the Lacey-Buek Iron Co., a firm of recent origin, which two years ago took hold of a broken-down and practically abandoned plant, and has now brought it up to the highest state of efficient and economical working, and is producing a foundry iron of the highest grade, in demand everywhere, from Texas even up to Maine. So quietly have the operations of the firm been conducted—the furnace went into operation in October, 1901—that even in Birmingham few people know how much has been accomplished or what a perfect plant of its kind has been built up on the ruins of the old Trussville Furnace, Mining & Manufacturing Co.'s furnaces located at Trussville, fifteen miles northeast of Birmingham, the extreme northeastern point of the Birmingham district. Messrs. Lacey and Buek were interested in iron properties in this district before the formation of this company, and seeing and seizing the opportunity which had been so long neglected by others, they bought the old Trussville plant, combined their holdings of ore, bought coal lands, and began to remodel and build up the furnace plant, until today, by adopting the strictest of business methods throughout, they have established a plant which can meet competition under any conditions of the market.

Accepting as a fact that they would have to offer some advantages to consumers in competition with older concerns, they went to work to produce something just a little bit better, which they did by using a liberal amount of brown ore in their mixture, and their success in the undertaking is the highest kind of a tribute to the managerial ability which has been displayed.

The company owns 1000 acres of red-ore lands, which contain ore, self-fluxing, low in silica, yielding 40 per cent. of metallic iron, and 1000 acres of brown ore, high in manganese, yielding 45 per cent. of metallic iron, and the two together making a fine mixture for blast-

ing, producing, in connection with the low-sulphur coke used, a very high grade of iron. Indeed, they unhesitatingly claim that it is the best iron in the district, being lower in sulphur, higher in manganese and possessing greater tensile strength, and thus being especially adapted to high-grade castings, particularly those requiring a high tensile strength.

Of decided advantage to the Lacey-Buek Company is the connection with the firm of John Dowling as superintendent. He has been for twenty-six years in the district, and many regard him as the foremost foundryman in it. He was for ten years with the Tennessee Coal, Iron & Railroad Co. at the Birmingham division, and had charge of the furnaces when he left there to engage with the Lacey-Buek Company last February. Mr. Dowling is regarded as the father of the modern method of ironmaking in this district, by which the output of the furnaces has been so tremendously increased. When he took hold of the furnaces in this district he expanded the hearths and stack lines, increasing the cubical contents of the furnace and adapting it to the better working of raw material, while well-nigh doubling the output. For instance, a furnace making ninety-two tons a day he ran up to an average of 180 tons production daily. Under his supervision the Lacey-Buek furnace is rapidly reaching the highest possible efficiency, combined with the lowest cost of production, and whereas the output is now 150 tons a day, it is proposed to raise it to 200 tons by next spring.

The president of the company is Mr. C. E. Buek, himself an iron man of ability and experience. Mr. Buek came to Birmingham two years ago, when the Lacey-Buek Company was formed, and he has had charge of the many improvements which have been made in the plant. The stack has been completely overhauled and improved, a new blowing engine has been added, making four in all, and there are now four hot-blast stoves, all in excellent condition. A contract has been let to equip the furnace with the most modern skip hoist and top-filling device, whereby five men can do the work of at least twenty-five under the present method. Automatic and labor-saving devices are adopted wherever possible. A coal-washer has just been completed which eliminates the slate and sulphur and makes possible a very superior coke. The company has now completed 202 coke ovens, which supply the furnaces, and the coal comes from the mines of the company, which are on a 300-acre tract containing four seams. With its own ore and coal, and with every facility for the economical handling of the raw material as well as the finished product, the Lacey-Buek Company is in a position to operate profitably on any market.

The water supply afforded by the location of the plant is one of great advantage. The company has a complete water-works system, including an 80-foot stand-pipe and five large pumps, furnishing the plant with an ample supply of clean, pure water. It is a freestone, and is non-scaling, a great factor in the preservation of the boilers. The plant is located within four miles of the head of the Cahaba river, which is fed by springs from sandstone hills. So remarkably pure and healthful is the water here that there is some talk of bottling it for shipment. It was on account of the abundant and superior water supply that the furnace was originally located at this point.

Although the company owns a large tract of land around the furnace, and is improving it with cottages for the workmen wherever desired, town-lot speculation has no part in the enterprise. A set-

lement will grow up around the furnace, no doubt, especially as the drainage and the water make it a healthy and attractive location. But any development in that line will be a mere incident of the strictly business proposition of making iron. The company owns a machine shop, blacksmith shop, carpenter shop and a commissary store at all mines, as well as one at furnace. About 250 hands are employed at the furnace and coke ovens, and they live in houses owned by the company. The plant is provided with the best transportation facilities, being on both the Louisville & Nashville and the Alabama Great Southern railroads. It is within two miles of the proposed route of the Seaboard Air Line, and will be given the advantage of a switch from that line.

The furnace, ore and coal mines and equipment represent an investment of about \$1,000,000, and will be capitalized for that amount, although their intrinsic value today is very considerably more. The value of the product of the plant will run from \$750,000 to \$1,000,000 a year, according to the price at which iron sells. The entire output of the furnace has been sold up to the 1st of next July.

Both Mr. Lacey and Mr. Buek are veterans in the iron-ore business, as is everyone else, for that matter, now at the head of furnaces in this district. The day of pioneering is over, and anyone who wants to get into the iron-making business down here might as well make up his mind to join forces with some one who has long been operating in this district. The iron men have not been idle, and the late arrival will find on investigation that most of the choice holdings in iron mines are in the hands of some one who has spent "long days of labor and night devoid of ease" in getting acquainted with the district and acquiring desirable properties. Mr. Lacey is of the well-known timber firm of J. D. Lacey & Co., Chicago and New Orleans, as well as of the Gardner & Lacey Lumber Co. He was one of the pioneers in the lumber industry of the South, having begun in that field in 1880, and has probably been instrumental in the development of as many timber and mineral industries as any man in the country. In 1892 he first came into the Birmingham district to make investigation of coal and iron properties. In 1896 he organized the Russellville Ore Co., which he afterwards sold to the Sloss-Sheffield Company. In 1897 he acquired the well-known ore properties of the Oredell Iron Co. at Oremont, Ga., now a part of the Lacey-Buek Iron Co., and also the Wilson Ridge and Bluffton properties. The Wilson Ridge mines are in operation, the ore being sold to other furnace companies. The Bluffton property is at present not operated.

Mr. Buek began mining red iron ore just outside Chattanooga in Georgia fifteen years ago, selling the ore to the furnaces in that district. Subsequently he organized the Estelle Mining Co., now selling ore of a superior grade to the furnaces at Chattanooga, as well as to the Tennessee Company at South Pittsburg and to the Dayton Coal & Iron Co. at Dayton, Tenn. Later he purchased properties on which he organized the Attala Iron Ore Co., which he afterwards sold to the Alabama Consolidated Coal & Iron Co., together with some properties at Gadsden. The Crudup Mining Co.'s properties, now a part of the Lacey-Buek Company's holdings, he purchased several years ago, being attracted by the great superiority of the ore and the cheapness at which it can be produced. Mr. Buek is also president of the Chattanooga Furnace Co., and of the Frictionless Metal Co. of Richmond, Va. The latter company was founded by Mr.

Buck fifteen years ago, and it was successful from the first, until the product has become standard the world over. That the success which Messrs. Lacey and Buck have achieved elsewhere will be duplicated in the Birmingham district there is no room to doubt.

New Memphis Industries.

Col. I. F. Peters, commissioner of the Industrial League of Memphis, Tenn., writes to the Manufacturers' Record that since October 25 the following establishments have been located in Memphis through the instrumentality of the Industrial League: Gillett Bros., carriage material, capital \$35,000; Helman Lumber Co., carriage material, capital \$20,000; Mahannah Lumber Co., carriage material, capital \$10,000; The Guirol Lumber Co., wagon material, capital \$150,000, and Benedict, Warren & Davidson, hardware company, capital \$100,000.

It is stated that the Chicago Mill & Lumber Co. of Chicago, Ill., has just closed a deal with Fuller Bros. of Marked Tree, Ark., for the entire business of the latter, consisting of over 190,000,000 feet of oak, ash and cottonwood stumps, a saw-mill, planing mill, box factory, stores, steamer and barges. Included in the deal is 12,000 feet of lumber and 10,000,000 feet of logs. The consideration is said to be about \$1,000,000.

The Gulf Red Cedar Co., which recently moved its plant for the manufacture of pencil stock from Greenville, Ala., to Mobile, began operations last week, with about 160 hands employed. This plant is devoted entirely to the manufacture of pencil stock for the manufacture of lead pencils, and the bulk of the product is exported. The cedar is cut into small slats, and two of the slats make half a dozen pencils.

At a meeting of the directors of the Ninety-Six (S. C.) Cotton Mill on November 20 Ellison A. Smyth of Pelzer, S. C., was elected vice-president. The company is proceeding rapidly with the erection of its main building under the supervision of J. W. Cagle, contractor, and will soon begin installing its machinery. Ten thousand spindles and 300 looms will be the equipment. Company is capitalized at \$200,000.

J. Heaton Barker of the Yerex & Jones Company, Victoria street, Wellington, New Zealand, writes to the Manufacturers' Record that American products are becoming more and more popular there, and that prejudice against them which once prevailed is gradually being overcome. His firm is doing a fairly extensive business in office specialties.

James Scott, Postoffice Box 1045, Cape Town, South Africa, writes to the Manufacturers' Record that he is interested in introducing into South Africa American makes of mining and other industrial machinery and electrical equipment.

A site for the Jamestown exposition of 1907 has been selected by the officers of the exposition company. The site contains 330 acres, with a long stretch of water front on Hampton Roads, directly opposite Fortress Monroe.

The Raleigh Chamber of Commerce has elected Messrs. Frank T. Ward, president; Willis G. Briggs, F. B. Arendell and W. B. Mann, vice-presidents; George Allen, secretary, and Joseph E. Pogue, treasurer.

In the first nine months of this year the shipments of pig-iron, cast-iron pipe and steel from the Tennessee-Alabama district amounted to 1,452,550 tons.

MINING.

To Mine North Carolina Gold.

Mr. James B. Bruyn of New York has organized a company with \$1,000,000 capital to develop what is thought to be a very valuable gold-bearing vein of ore, formerly worked for copper as the Fentress mine, near Greensboro, N. C. This company, with offices at 52 Broadway, New York, is composed of experienced miners. Messrs. Ira M. Black, Clarence Schoonmaker, James De Graff, W. F. Green, Dr. F. S. Betts, Albert Vedder, Addison Deidrich, William H. Corry and W. C. Dreyer are reported as members of the company. Ore taken from this property is said to assay \$40 to the ton; the vein 600 feet down is thirteen feet thick and widens. A five-stamp mill is now in operation, and fifteen new stamps, additional steam pumps, air compressors, etc., will at once be installed. Mr. Wilkins U. Green is in charge on the grounds.

To Develop 5000 Acres of West Virginia Coal.

It is reported that for the sum of \$100,000 a Pennsylvania syndicate has purchased 5000 acres of coal land near Valley Falls, W. Va., extending well into what is known as the "Gladys Creek Country." This land, it is said, will be operated on a very extensive scale, new machinery and the latest improved mining equipment to be installed for the working. The shipping point and headquarters of this company will be Valley Falls, at which point the holding closely adjoins the B. & O. Railway. The deal was consummated by Charles R. Durbin of Grafton, W. Va., and Mr. Lloyd Canning of Valley Falls.

17,000-Acre Deal in West Virginia.

Seventeen thousand acres of coal land on Laurel creek, in the Quinimont district in West Virginia, has been sold by Capt. J. L. Beury, Fayetteville, W. Va., to New York capitalists for \$425,000. The company making the purchase already owns extensive coal lands adjoining this, and bought primarily to obtain an opening on Laurel creek, the land not showing up quite as well as the purchasers had hoped, although quite well enough to warrant the developments which will soon begin.

6000 Acres of Tennessee Coal.

James A. Dunn, H. C. Staggers and other Pennsylvania parties are reported as the purchasers of 6000 acres of valuable coal lands near Isolin, Tenn. The purchase price was \$10 per acre. This is known as the Lilenthal and Daniel Smith tracts, and lies on No Business and Adams creeks. It is said to have the Sewance seam. The vein is five feet thick. It is said a coal company will form for the development of this property. Isolin will be the shipping point.

Will Mine Asphalt.

A company with \$400,000 capital has been organized by the following gentlemen to mine asphalt in Comanche county, near Guthrie, O. T.: Dr. Brownup of Utica, N. Y.; O. G. Young of Kansas City, Mo.; Dennis Flynn and Charles E. Billingsley of Guthrie; C. W. Brown of Comanche, O. T.; Stephen Brown of Rush Spring, O. T.; J. C. Robb of Kingfisher, O. T., and C. D. Johnson of Perry, O. T. The company will erect a plant to cost \$40,000 to mine these beds.

Developments Under Way.

Hamilton Coal & Coke Co., Newburg, W. Va., recently incorporated with \$150,000 capital, has begun developments on

2300 acres of coal lands by the opening of mines with 200 tons daily capacity and the erection of 150 coke ovens. Irving Adams of Baltimore, Md., is president; C. Brotemarkle of Lonaconing, Md., is secretary, and W. A. Sommerville of Frostburg, Md., is general manager of this company.

Mining Notes.

John Robinson Coal Co. is developing coal lands near Pruntytown, W. Va.

Lamar Milling & Mining Co., Central City, Mo., has been chartered, with \$4800 capital, by George Horning, J. H. Fletcher, B. Powell and others.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala., has not yet begun to develop its coal properties near Henry Ellen. For the present this property will not be developed.

Coal has been discovered in a vein one foot thick and thirty feet down on the property of A. M. Duffy, near Humboldt, Tenn. This will be carefully investigated and probably developed.

It is said that Mr. M. Ramsay, New York city, N. Y., has purchased the stock of the Irwindale gold mine near Murphy, N. C. Extensive developments are reported to be in contemplation.

Vinita Oil, Coal & Gas Co., Vinita, I. T., has been incorporated, with \$100,000 capital, for the development of oil, coal, gas and mineral lands. T. K. McGiffin is the president of this company.

Phoenix Mining & Development Co. has been incorporated in Oklahoma City, O. T., with \$1,000,000 capital, by H. M. Whitney of St. Louis, Mo.; C. G. Jones, G. W. Patrick, F. L. and W. P. Conger of Oklahoma City, O. T.

H. W. Brennan, Vernon, Tenn., is in charge of the work being done by the Spring Creek Mining Co., chartered in Nashville, Tenn., two weeks ago. This company proposes to mine iron at Vernon, and is said to own some valuable property there.

W. L. M. K. and J. F. Gordon are the incorporators of the Gordon Land Co., chartered at Madisonville, Ky., with \$5000 capital, to buy, sell and develop coal and mineral lands. This company owns property lying along Greasy and Clear creeks.

The Allegheny Ore & Iron Co., Clifton Forge, Va., is reported as the purchaser of the Huddleston iron mines, near Covington, Va., owned by the Potts Valley Mining Co. The railroad and washer equipments used in mining on this property are included in the sale.

Virginia Consolidated Copper Co., Stony Man, Page county, Virginia, is developing property five and one-half miles from Luray, Va., on a spur of the Blue Ridge, known as Hook mountain. An air compressor and a large gasoline engine have been installed, and a shaft sunk to a depth of 120 feet. For the present it is the intention to develop this property, getting the positions underground of all veins, then a smelter or mills will be erected for working the ore. T. A. Dunn is general manager of this property.

The Hon. Neil Brown and J. H. Kochler of Wausau, Wis., closed a deal at Jasper, Ala., last week for 30,000 acres of timber land in Walker county, Alabama, and diverging into the county of Winton. It is stated that the Winton Lumber Co. is largely interested, and a company is about to be organized to develop the district contained in this acreage.

The International & Great Northern Railroad has completed its extension into Fort Worth.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

GOULD LINES TO BALTIMORE.

Western Maryland Pushing Condemnation Proceedings for its Extension.

The Western Maryland Railroad Co. has begun condemnation proceedings in the western suburbs of Baltimore preparatory to building its proposed extension to a tidewater terminal in the southern part of the city, where it recently closed a deal for river-front property. The proposed extension is to leave the Western Maryland main line at a point in Baltimore county eight or nine miles from its present city terminal, and will run south to the Gwynn's Falls valley at Dieckeyville, formerly Wetheredville. This valley will be followed to the middle branch of the Patapsco river, where the line will cross that stream by a long bridge to the west end of Donaldson street, whence it will build to the proposed terminal, a few blocks distant.

There will be considerable heavy work on the extension; some of the cuts will be forty feet deep. The steepest grade will be 1.2 per cent. with traffic, and the sharpest curve 7 degrees, compensated to relieve resistance. An official of the company says that the condemnation proceedings will be pushed to a close, for it is desired to begin construction as soon as possible.

It is furthermore reported from Cherry Run, W. Va., that a contract for building the 65-mile connecting link between the Western Maryland Railroad and the West Virginia Central Railway has been awarded to the Denger Construction Co. of New York, which is allied with Wabash interests. Vice-President Landstreet declined to say anything about this. The report, however, says that the extension will run east from the West Virginia Central and cross into Maryland just below Cumberland by way of the Old Davis Cut through Knobley at Ridgely, thence to Little Orleans, Md., closely following the line of the Chesapeake & Ohio canal. From Little Orleans the line will cross the Potomac into West Virginia, recross into Maryland at the first canal lock below Little Orleans, and from there run through Hancock to Cherry Run.

The completion of these lines, together with the extension of the Little Kanawha Railroad in West Virginia, will give the Gould lines their long-desired outlet to an Eastern tidewater terminal.

J. W. STEELE, COMMISSIONER.

Colonization Agency of Southwestern Lines to Be Opened.

Advices from St. Louis state that the railroad companies interested have opened the campaign for colonization in the Southwest. The organization will have its headquarters in St. Louis, and is to be known as the Colonization Agency of the Southwestern Lines. Offices are to be leased in the railroad business center, and are to be opened December 1.

J. W. Steele has been appointed head of the agency, with the title of commissioner. He has been editor of the Chicago, Burlington & Quincy Railway's "Corn Belt," a monthly published in the interest of the Northwest, and has been located in Chicago. The special committee which reported on the organization has been continued as a managing committee indefinitely. It is composed of H. C. Townsend, general passenger agent of the Missouri Pacific Railway, who is chairman, and John Sebastian, George T.

Nicholson and Bryan Snyder, who are, respectively, passenger traffic managers of the Chicago, Rock Island & Pacific, the Atchison, Topeka & Santa Fe and the St. Louis & San Francisco lines. They will complete the organization in detail, assisted by Mr. Steele, who is described as having had wide experience in colonization work and railroad advertising. He has a wide acquaintance, and knows the Southwest. He was unanimously chosen from among fifty applicants for the position.

The railroads represented in the colonization scheme are the Missouri Pacific and St. Louis, Iron Mountain & Southern, the Chicago, Rock Island & Pacific, the St. Louis & San Francisco, the Atchison, Topeka & Santa Fe, the Missouri, Kansas & Texas, the St. Louis Southwestern, the Texas & Pacific, the International & Great Northern and the Fort Worth & Denver City. The Southern Pacific and the Kansas City Southern were represented at the meeting when Mr. Steele was appointed commissioner, and have taken under consideration the question of joining the organization.

The 'Frisco's Extension Plans.

According to a report from St. Louis, the correct plan of the St. Louis & San Francisco Railroad to make a connection from St. Louis with the Chicago & Eastern Illinois Railroad is in the way of only a trackage arrangement. The contemplated plan is for the 'Frisco to use the Big Four to Mitchell, Ill.; to build a double track from Mitchell to a point near Hillsboro, on the Big Four, thus shortening the present Big Four line between Mitchell and Hillsboro about twelve miles. From Hillsboro to Pana, more than twenty-six miles, are to be double track, and from Pana to Findlay, on the Chicago & Eastern Illinois, another line will be built and double-tracked, also for a distance of twenty-six miles. The two companies are to use the line jointly, and it will give a route between St. Louis and Chicago sixteen miles shorter than the Big Four's present route.

It is rumored that the 'Frisco will get east from Chicago by making an alliance with the Grand Trunk Railway, and it is still furthermore reported that the Big Four will join the 'Frisco in its effort to reach New Orleans. The 'Frisco is pushing its extensions in Texas, and President Yoakum is quoted as having made the positive statement that an extension will be built from Carrollton to Dallas.

Paragould & Memphis.

The Paragould & Memphis Railroad Co. has just been chartered in Missouri and Arkansas. Its purpose is to build a railway about fifty-two miles long from Paragould, Ark., to Osceola, Ark., the line running through the southeast corner of Missouri.

According to the charter of the company, the route will be as follows: From Paragould, Greene county, Arkansas, in a southeasterly and easterly direction, a distance of eight miles, to the St. Francis river, in that county, crossing the river into Dunklin county, Missouri, and to thence run in a northeasterly direction to Cardwell, in Dunklin county; thence southeasterly nine miles to the county line between Dunklin county, in Missouri, and Mississippi county, in Arkansas, and thence east twenty-nine miles to Osceola, Ark.

All that portion of the road which is in Missouri will be in Dunklin county, having a total of fourteen miles in Missouri and thirty-eight miles in Arkansas. The incorporators of the company are John W. Vail, W. H. Niblick, A. T. Vail, S. N. Vail, Daniel Sprang, Don Quinn of Decatur, Ind., who have 565 shares, and

E. A. Vail, J. E. Thomas, J. B. Hale of Cardwell, Mo., who hold thirty-five shares. The capital is \$525,000, of which \$60,000 has been subscribed.

Now an L. & N. Line.

Announcement is made of the purchase of the Yellow River Railroad by the Louisville & Nashville Railroad. The Yellow River line extends from Crestview, Fla., on the Louisville & Nashville, northward to Florala, Ala., twenty-seven miles, with a branch from Woods to Simpson, Fla., making a total of thirty-two miles of road. The line for some time has had close relations with the Louisville & Nashville, and it will give the latter a direct connection with its line to Geneva, Ala. J. S. Reese was president and treasurer of the Yellow River Railroad Co.; W. B. Wright, vice-president, and E. Ewing Reese, general manager, who also constituted the directors. A new board of directors has now been elected, consisting of F. C. Brent, W. A. Blount and E. O. Saltmarsh. Mr. Saltmarsh, who is a division superintendent of the L. & N., was chosen president, and Mr. Brent, secretary and treasurer. It is reported that the Louisville & Nashville will make improvements upon its newly-purchased line, for which, it is said, \$4800 per mile was paid. It runs through a rich timber country.

New Mobile Terminal.

The Mobile Railway Terminal Co. has been incorporated and organized at Mobile, Ala., by interests connected with the Southern Railway and the Mobile & Ohio Railroad, to build a new railway terminal. The incorporators are E. L. Russell, Jas. H. Masson, Gregory L. Smith, Henry Tacon, with C. S. Clarke and R. V. Taylor, associates. Mr. Russell was elected president, and Mr. Tacon, secretary. The directors are Samuel Spencer, president of the Southern Railway; A. B. Andrews, its first vice-president; W. W. Finley, second vice-president; J. H. Masson, Gregory L. Smith, C. S. Clarke, general manager of the Mobile & Ohio Railroad, and E. L. Russell, its general counsel.

The incorporation papers show that the Mobile & Ohio Railroad holds forty-seven shares of the stock, the Southern Railway forty-six shares, and that the other seven shares, making a total of 100, are distributed among the directors and incorporators. Engineers are reported at work on the terminal plans. The cost of the terminal is not yet decided.

Morelia & Tacambaro.

Mr. A. J. Peyton of A. J. Peyton & Co., bankers and brokers, writes from the City of Mexico to the Manufacturers' Record saying that the concession for the

Morelia & Tacambaro Railway covers a line from Morelia (capital of the State of Michoacan) southwest to Tacambaro and Ario, and from Morelia northwest to Puruandiro and Irapuato, on the main line of the Mexican Central, with a branch from Puruandiro to La Piedad, on the Guadalajara division of the Mexican Central.

Its total length will be about 225 miles, and will be standard gauge. The country through which this projected line will run abounds in all agricultural products, tropical fruits, cattle, hogs, hides and minerals. It is estimated, conservatively, that the road will get in freight at least 400,000 tons per year, and probably a great deal more. Engineers are in the field running a preliminary location, and construction will commence at an early date.

Geneva Railroad Plans.

Mr. J. J. Morris, president of the Geneva Railroad Co., writes from

Geneva, Ala., to the Manufacturers' Record concerning the road to be built by the company from Geneva to Chancellor's, where it will connect with the Chatahoochee & Gulf division of the Central of Georgia Railway. He says that the line will run through a level piney-woods country which has a sandy topsoil with a clay foundation. This country is thickly settled, and the line will be about ten miles long for the present. The company hopes to be able to begin work soon. It is now receiving propositions for the sale of its bonds, and as soon as all are received the directors will meet to consider bids and let contracts. The full list of the officers of the company is as follows: J. J. Morris, president; Ed. M. Johnson, secretary and general manager; J. R. Clark, treasurer; directors, J. J. Morris, E. M. Johnson, J. R. Clark, J. M. Jeter, W. L. Warren, James Lurie and W. W. Barnett.

Bluegrass Traction Work.

The Bluegrass Consolidated Traction Co. has begun the survey for its proposed line from Versailles to Frankfort, Ky., and the survey for the line from Winchester to Mt. Sterling is also to be pushed.

Mr. Harold C. Beatty, secretary of the company, whose headquarters are at Lexington, Ky., is reported as saying that the company will retain all its franchises and will begin work within the required time. The lines in Woodford and Clark counties must be in operation before January 1, and it is stated that grading will soon begin on the lines from Versailles to Frankfort and Versailles to Lexington, as well as on those from Winchester to Mt. Sterling and from Winchester to Lexington.

The total length of line from Frankfort to Mt. Sterling via Versailles, Lexington and Winchester is about sixty miles.

Nashville Railway Plans.

Nashville dispatches report that the new owners of the Nashville Railway Co. have prepared plans demanding an expenditure of \$2,379,000 on the street railway and electric-light plant. It is proposed to rebuild much of the present railway and to construct several suburban extensions. It is stated that the new plant of the Cumberland Electric Light & Power Co., which is part of the street-railway property, will cost \$784,000, and \$1,595,000 will be expended on improving the street-car system, including \$200,000 for new cars. The plans have been prepared by C. F. Uebelacker of the engineering firm of Ford, Bacon & Davis of New York.

No Change in L. & N.

President Robert G. Erwin of the Atlantic Coast Line, which controls the Louisville & Nashville Railroad, is reported in dispatches from Savannah, Ga., as saying that the management of the L. & N. will continue unchanged, and in support of this statement he cites the case of the Louisville & Nashville owning a majority of the stock of the Nashville, Chattanooga & St. Louis Railway, which is under an entirely independent management.

Railroad Notes.

It is reported that the 'Frisco system will erect a roundhouse and machine shops, as well as a new depot, at Luxoro, Ark.

Chief Engineer H. L. Montandon of the Orange & Northwestern Railroad has, it is understood, begun the survey for the proposed extension from Buna, Texas, to Shreveport, La., about 135 miles.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

FOR BRITISH-GROWN COTTON.

Latest Phase of Efforts to Raise the Staple in the Empire.

The usual fall agitation of the project of raising cotton within the British empire is now under way in England. At the last quarterly meeting of the Manchester Chamber of Commerce the president, Mr. John Thomson, said:

"The importance of an increased supply of cotton of good quality and staple is being deeply felt in Lancashire. The American mills now use a very large part of the American cotton crop, and for the last three years the proportion available for the rest of the world has steadily decreased. It is felt to be unsafe to be dependent on the United States alone, especially when we consider how ready their financiers are to take advantage of any opportunity which may promise a successful corner. The British Cotton-Growing Association is vigorously endeavoring to introduce and extend the growth of the plant, especially in such parts of Africa as the West Coast and the Eastern Sudan, where there is a suitable soil and climate, a good supply of labor, and facilities for transport. In the West Indies also some stimulus might be given to the production of good quality. In Egypt proper there is perhaps not much room for increase, the suitable land available being mostly under cultivation, while India, though capable of producing a vast supply, has never yielded any large quantity of strong long-stapled cotton. Every year at this season we have alarms of a reported failure of the American cotton crop. Estimates are sent us by different authorities, varying sometimes as much as a million and a-half or two million bales. Would it be possible for Lancashire to appoint a first-rate independent man, an expert in the cotton trade, to travel in America, say, from August to January, and report upon the condition and prospects of the growing crop? Early and correct information might save Lancashire from very serious losses in some seasons."

Mr. J. A. Hutton, chairman of the African committee of the Chamber, said that the British Cotton-Growing Association had arranged for the engagement of white American experts to go to each African colony, and it was arranged for a supply of seed to be sent from the United States and from Egypt into the colonies. He said that the question of West Africa as a field from which to supply the English cotton mills depended absolutely upon whether they could afford to pay the natives a price that would remunerate them for their labor. The Manchester Chamber has arranged for conferences with the governors of African colonies, and one of them, Sir Matthew Nathan, referred the Chamber to letters written in 1849, in which statement was made that the cotton plant grew with singular facility on the Gold Coast, and that it should be added to the list of exports to England. Governor Nathan said that these words were as true today as when they were written, more than fifty years ago, and that he would co-operate with the Cotton-Growing Association.

It is reported from Rhodesia that cotton grows wild there, and that there is no doubt that a good quality can be raised by the adoption of proper methods.

A fund for the promotion of the growth of cotton within the empire now exists, \$55,000, and the spirit which animates some of the promoters of the scheme is

shown in the following from a letter written to the London Dispatch:

"I trust you will excuse a slight digression by permitting me to say that there is no valid reason why England and her colonies should not only grow cotton, but provide all her raw material; in fact, everything the nation may require. Britain's flag flies in every climate under the sun, and her resources are illimitable. All that is necessary is co-operation and combination of interests between the mother country and the colonies, backed up by energy, perseverance and capital. It is a vital question for the empire, if we are to hold our own, that the home and colonial governments should have agricultural colleges, where students can study and the resources of the empire can be brought to full maturity. There would be no starving millions in India then. The more independent Britain and Greater Britain can be made of foreign supplies the stronger she will become as an empire. America is not the only country that can make successful combines. A solid commercial combine between Britain and her colonies would stagger the world."

Orr Cotton Mills.

Reference was made last week to the unconfirmed report that the Orr Cotton Mills of Anderson, S. C., had decided to double its plant. The facts are that the board of directors of the company have recommended an increase of 30,000 spindles and 800 looms, and the stockholders will meet in January to act upon the proposition. The Manufacturers' Record is reliably informed that the extension will doubtless be voted, and that J. E. Surrine of Greenville, S. C., will be the engineer in charge. The company at present has 25,000 spindles and 700 looms. To make the improvements referred to as in prospect would require the expenditure of probably about \$600,000. James L. Orr is president.

A \$130,000 Worsted Mill.

Announcement is made that a \$130,000 worsted mill will be added to the textile interests of Louisville, Ky. This new plant will be built and owned by Messrs. John T. Moore of Louisville and Charles F. Murphy of Boston, who are, respectively, secretary and president of the Hope Worsted Mills, a \$100,000 plant at Louisville. They have obtained site adjacent to their present plant, and will erect a building three stories high, 80x200 feet, to accommodate the machinery contemplated. About \$100,000 will be expended for the machinery and \$30,000 for the building. Further details will be ready in the near future.

The Cotton Movement.

In his report for November 21 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during eighty-two days of the season was 4,602,213 bales, an increase over the same period last year of 327,995 bales; the exports were 2,179,808 bales, an increase of 55,446 bales; takings by Northern spinners 588,688 bales, a decrease of 14,573 bales; by Southern spinners 550,603 bales, an increase of 56,882.

Textile Notes.

Geo. L. Neville, 602 Crawford street, Portsmouth, Va., wants to buy 10,000 pounds of cotton waste.

T. L. Gwyn of Elk Creek, Va., contemplates establishing a knitting mill, and is obtaining estimates on cost of a small plant for producing 84-needle hosiery.

E. A. Smyth of Pelzer, S. C., states that there is no foundation for the report,

mentioned last week, that he and R. A. Lewis of Belton, S. C., will build a cotton mill at Stantonville, S. C.

Messrs. J. P. Thurman, J. L. Kennedy, J. L. Fogg, J. F. Taylor and C. O. Summers have incorporated the "Gen" Knitting Mills, with capital stock of \$30,000. They have secured the plant of the Hanson-Crawley Company.

R. L. Christie of Colora, Md., hopes to organize his fiber-working company, mentioned last week, by December 1. A plant for manufacturing suit cases, trunks, satchels and carrying cases from vulcanized fiber is proposed.

Hucomuga Cotton Mills of Greensboro, N. C., have been put in operation with fifty looms weaving. The full 144 looms are expected to be in operation within another week. It was recently announced that Caesar Cone and associates had purchased this plant.

Messrs. E. F. Adams, F. B. Norris, C. J. Barnard, George Dashner, I. A. Baker, G. B. Norris and H. E. Jones of Celeste, Texas, have incorporated the Perrin Cotton Mills, with capital stock of \$75,000. Their purpose is stated to be the manufacture of cotton yarns and cloth, etc. No details as to plant have been announced.

The Blue Ridge Hosiery Mills of Landrum, S. C., held a meeting of stockholders during the week in order to consider enlarging the plant. It was decided that capital stock be increased from \$20,000 to \$40,000 in order to double the capacity, and immediate arrangements will be made to effect the betterments. Plant at present has thirty knitting machines in position, and manufactures cotton seamless hosiery.

Norfolk (Va.) Yarn Mills, reported incorporated several weeks ago, has leased and will operate the plant owned by the Lambert's Point Knitting Mills, heretofore operated by the Norfolk Manufacturing & Spinning Co., and will manufacture wool-spun cotton yarns. The company intends to add some machinery, and is in the market for Davis & Furber cards and mules; second-hand 48-inch cards in good condition will suit.

The Baldwin Manufacturing Co. will establish a textile mill at Baldwin, four miles from Elkton, Md., the latter being the postoffice address. Site has been purchased, and a stone building 80x100 feet will be erected to accommodate the machinery. About forty people will be employed in the completed plant. The character of the product has not been stated as yet, but presumably it will be a cotton-cloth mill, as the company has previously been engaged in weaving in Cecil county.

QUOTATIONS OF COTTON YARNS.

By Buckingham, Paulson & Co., New York, Philadelphia and Chicago,
November 24.

No. 10s-1 and 12s-1 warps.....	14 @—
No. 14s-1 warps.....	14½ @—
No. 16s-1 warps.....	15 @—
No. 20s-1 warps.....	15 @15%
No. 22s-1 warps.....	15½ @—
No. 26s-1 warps.....	16 @16%
No. 6s to 10s yarn.....	13½ @—
No. 12s-1.....	14 @—
No. 14s-1.....	14 @14%
No. 16s-1.....	14½ @—
No. 20s-1.....	15 @15%
No. 22s-1.....	15½ @16%
No. 26s-1.....	16 @16%
No. 8s-2 ply soft yarn.....	13½ @14
No. 10s-2 ply soft yarn.....	14 @—
No. 8s-2 ply hard.....	13½ @13½
No. 10s-2 ply hard.....	14 @—
No. 12s-2 ply hard.....	14 @14½
No. 14s-2 ply.....	14½ @14½
No. 16s-2 ply.....	14½ @15
No. 20s-2 ply.....	15½ @15½
No. 24s-2 ply.....	16½ @16½
No. 26s-2 ply.....	16½ @17
No. 30s-2 ply chain warps.....	18 @—
No. 30s-2 ply chain warps.....	17 @—
No. 26s-2 ply chain warps.....	17½ @—
No. 24s-2 ply chain warps.....	17 @—
No. 20s-2 ply chain warps.....	15½ @—
No. 16s-2 ply hard twist.....	15 @—
No. 20s-2 ply hard twist.....	15½ @—
No. 26s-2 ply hard twist.....	17 @—

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., November 25.

The movement in local phosphate circles is confined to a moderate distribution, and, as in other fertilizer ingredients, the market continues quiet. Advice from points of production in the Southern phosphate belt continue to show considerable development in mining sections, with an unusually liberal increase in shipments from the ports. In the Florida section the market shows some improvement, especially in the land-pebble section, the prominent companies holding the product at high figures. Florida hard rock offerings are moderate, and few sales during the week are reported. The shipments of land pebble and hard rock from Port Tampa for the week ending the 21st inst. amounted to 17,625 tons foreign and domestic. In Tennessee there is a very fair movement, and rock fit for export finds a large outlet in the market at Mt. Pleasant. The demand for domestic rock is steady, and values are showing better form. South Carolina rock is in fair request from foreign sources, while in a domestic way the movement is light. Prices are generally nominally steady.

Fertilizer Ingredients.

The ammonium market still continues very quiet, with prices unchanged and some inquiry from Eastern buyers. There is no demand of any moment from Southern sources. Western packers report stocks light, and material is held at outside figures.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 97½ @ 2 00
Nitrate of soda, spot Balto...	1 90 @ 2 00
Blood.....	2 55 @ 2 57½
Azotine (beef).....	2 55 @ 2 57½
Azotine (pork).....	2 55 @ 2 57½
Tankage (concentrated).....	2 37½ @ 2 40
Tankage (9 and 20).....	2 52½ & 10½ @ 2 55 @ 2 57½
Tankage (7 and 30).....	21 00 @ 21 50
Fish (dry).....	30 00 @ 32 50

Phosphate and Fertilizer Notes.

The steamship Critic was loading on the 19th inst. a cargo of 33,000 tons of phosphate rock at Port Inglis for shipment to Liverpool, England.

The Twentieth Century Chemical Co. has been organized at Brownsville, Tenn., with a capital of \$500,000. Those identified with the enterprise are John A. Caltray, N. R. Dupree, W. W. Wagner, H. W. Stratton and S. J. Chapman.

It is stated that the Virginia-Carolina Chemical Co. of Richmond, Va., has purchased from James W. Bodley and others the Bodley Wagon Works at Staunton, Va., and will begin work at once putting in machinery for the manufacture of fertilizers.

The land-pebble phosphate plant, one of the oldest phosphate works in Polk county, Florida, was destroyed by fire on the 20th inst. The loss and insurance is unknown. R. G. Rhett of Charleston, S. C., is president and treasurer of the company; L. W. Haskell of Savannah is selling agent, and B. H. Heywood of Atlanta is general manager.

The stockholders of the Brown Chemical Co. of Nashville held a meeting last week in that city for the purpose of considering and acting upon several important propositions. The sales and issue of treasury stock and the increase of the capital stock of the company was discussed. A committee composed of the president, J. W. Love; secretary, H. J. Leighton, and Capt. T. M. Steeger was appointed to amend the charter so as to increase the capital stock from \$50,000 to \$100,000. No steps were taken to change the name of the company.

During the week ending the 21st inst. the following shipments of phosphate rock were reported: British steamer Powderham for Nantes, France, with 3000 tons from the Palmetto Phosphate Co.; schooner J. M. Haskell for Philadelphia with 2250 tons from the Electrical Phosphate Co.; Austrian steamer Jennie, 2250 tons; schooner Stella B. Kaplan for Alexandria, Va., with 1625 tons from Jos. Hull; schooner David P. Davis for Cartaret with 1750 tons; schooner S. P. Blackburn for Baltimore with 2500 tons from the Palmetto Phosphate Co.; schooner Mary F. Barrett for Cartaret, N. J., with 2490 tons; schooner Francis M. for Baltimore with 1760 tons from Joseph Hull, or a total of 17,625 tons.

United States Consul Kehl of Stettin has reported to the State Department at Washington, D. C., that Florida phosphate will meet a serious competitor in the recently-discovered deposits on Ocean Island, northeast of the Solomon Islands, which appear to be superior in quality to either Florida or Christmas Island phosphate. According to an analysis made by the director of the largest local chemical works and importers of the American rock, the Ocean phosphate contains 86.15 per cent. of tribasic phosphate of lime, to 76.95 per cent. for Florida and 83.08 per cent. for Christmas phosphates. Of oxide of iron and alumina, the Ocean contains .68, Christmas 1.83 and Florida 2.2 per cent. Local statistics show that the United States exported to Stettin in 1901, 70,341 tons of phosphate.

Cottonseed-Oil Notes.

The following quotations on cottonseed products were made by Galveston exporters on the 24th inst.: Prime crude oil, loose, f. o. b. Texas mills, 28½ cents; prime refined, 32½ cents; prime cottonseed meal and cake, November, \$23 to \$23.25; December, \$22.50 to \$22.75.

Cottonseed quotations at Memphis, Tenn., on the 22d by river were \$13 per ton; by rail in bulk, \$12, delivered at Memphis; prime crude oil, 28½ cents per gallon, and prime summer yellow, 31 cents; cottonseed meal, per ton, \$20 to \$20.50; cake, \$21 to \$21.25; linters, 2% to 3 cents.

In the section of Mississippi adjacent to Jackson cottonseed has again declined, mills now paying \$12 a ton for seed, both for f. o. b. at station and wagon seed. The supply of seed, it is said, exceeded earlier anticipations, and the drop from \$16 and \$17 per ton is in accordance with the law of supply and demand.

Cottonseed products were quoted in New Orleans on the 24th inst. as follows: Prime refined oil in barrels, per gallon, 33½ cents; off refined oil in barrels, per gallon, 32½ cents; prime crude oil, loose, per gallon, 27½ cents; prime cottonseed cake, per ton of 2240 pounds, \$26.25; prime cottonseed meal, per ton of 2240 pounds, \$25.50 to \$25.75; soap stock, per pound, loose, 1.15 cents; linters, choice-A, 3½ cents; B, 3 cents; C, 2½ cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, \$14; in bulk delivered at New Orleans, per ton of 2000 pounds, \$13.

A meeting of hardwood lumber dealers, called at the instance of the Hardwood Lumber Dealers' Association of the United States, was held last week at Asheville, N. C., for the purpose of adopting a uniform scale in the grading of hardwood lumber. The meeting was highly successful, and a sectional association was organized. The officers of the association elected were as follows: H. M. Dickson, vice-president, and D. C. Cummings, secretary.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., November 25.

The week under review has shown an average volume of business in the various departments of the local lumber market. The demand from the usual sources is regular, while stocks in some cases are lighter than usual, and the list of values for all commercial woods is very steady. Local dealers, as well as out-of-town buyers, have been purchasing freely and adding to their supplies. In North Carolina pine the local distribution continues free, and stocks are generally about equal to the demand, which at the moment is not urgent. At milling points in Virginia and Carolina the movement is quite active, and orders are being filled with considerable dispatch; in fact, the outlook for a substantial trade in North Carolina pine is very encouraging. Cypress is in fair demand from builders, and North Carolina grades are steady, while South Carolina and Gulf grades are firmer. White pine is in moderate request, with values firm. Poplar is in good demand, with prices all along the line very steady. In hardwoods the situation is unchanged, receipts being light on account of car shortage, and prices firmer in consequence. The foreign export business is quiet, the business in a domestic way receiving more attention.

Charleston.

[From our own Correspondent]
Charleston, S. C., November 24.

The demand for lumber in this section is steady, and the volume of business each week shows the market to be in a very healthy condition. Stocks at milling points are quickly absorbed, and there is no accumulation at any point. As fast as cars can be had shipments from mills are rushed to the seaboard to be consigned to their destination at Northern and Eastern points. In Chesterfield county and other lumber sections large wholesale dealers have received more orders at their mills than they can handle, and are placing some with mills in Charlevoix and other points. It is stated that there are, roughly estimated, about 1500 carloads of billed lumber awaiting shipment in Chesterfield county alone, scarcity of cars being the cause of this accumulation.

The tone of the market in Charleston is active, shipments being liberal. During the week under review the following vessels cleared with full cargoes of lumber: Schooners Lizzie Babcock with 386,000 feet, Charles K. Buckley with 410,000 feet and Mary L. Crosby with 314,000 feet, all for New York; the schooner Annie R. Bishop for Elizabethport, N. J., with 393,000 feet of lumber; steamer Carib for Boston with 41,151 feet, and steamer S. T. Morgan for Philadelphia with 1,400,000 feet. The total shipments from this port since September 1 aggregate 21,705,860 feet, of which 361,000 feet were foreign and 21,344,860 feet were coastwise. Freights continue steady, with a moderate offering of tonnage; lumber to Boston and Sound ports \$5.50, to New York \$5.25, Baltimore \$4.25; crossties to New York, 15½ cents for 44 feet.

Mobile.

[From our own Correspondent]
Mobile, Ala., November 24.

The timber market continues to show a strong tone, and, judging from the sales

of the week and general conditions, a further advance is probable. Sales during the week have been reported at 18 to 18½ cents per cubic foot. It is stated that a timberman was offered 18 cents for his cut to February 15, 1903. Foreign advices are more favorable. The London Timber Trades Journal of the 15th inst., in reviewing the market, has the following: "The favorable state of our overseas trade, as well as the expansion of our imports, makes the outlook for 1903 a very hopeful one, inasmuch as a good industrial year lessens the chance of timber prices receding as the season advances, which is always a disastrous event to early buyers when values are at a high point. The import of sawn and planed wood for the ten months is nearly a million loads in excess of the import of last year, but this is likely to be greatly reduced before the season concludes. At present the wood stock throughout the country generally may be considered a heavy one. At the London auction sales this week prices of deals, battens and flooring were firm, without any buoyancy, but, with very few exceptions, the goods sold 'without reserve' could not be replaced at the money they realized. There has been great activity in the mahogany and hardwood trade. The market has ruled firm, and a large business has been done at hardening prices. At the two London sales by auction there was a full attendance, with spirited bidding and competition, the only time at which it flagged being when the goods were of small and inferior condition." The lumber trade is very active, and mills all along the Gulf have orders which will keep them busy for six months to come. The River Plate trade is improving, and the Cuban business is of better volume. Lumber and timber freights are very steady, with a moderate offering of tonnage. The German steamer Martha Russ, 1261 tons was chartered last week to load from the Gulf for France with timber at 85/ one port, 85/6 if two ports, January; bark Marpesia, Pensacola to Rio Janeiro with lumber at \$11.50; bark Cambusdron, Pensacola to Rio Janeiro at \$12.

Nashville.

[From our own Correspondent]
Nashville, Tenn., November 24.

The conditions surrounding the local lumber market still continue favorable, and especially so for sellers, as the scale of prices from cull sycamore to high-grade quartered oak is strong, with the demand quite pronounced. Stocks of lumber in a local way are being rapidly reduced, and although manufacturers are working night and day, there is no accumulation. Quartered oak, both red and white, is scarce, the supply of dry stock being quite limited. In walnut prominent companies report their trade 25 per cent. greater than for the same period last year, the demand being greater than the supply, with values firm and tending higher. Poplar is scarce, and prices firm, with an increasing demand. Local millmen find it difficult to fill orders at the moment, but even should a rise occur in the upper rivers to bring out logs, orders already on file would absorb half the logs in sight. Chestnut is scarce and higher, bringing better prices than ever before, on account of the scarcity of this wood.

Lumber Notes.

Messrs. Schumacher & Boye of Cincinnati, Ohio, will soon be in the market for several carloads of yellow-pine lumber.

The British steamer Aureola arrived at Gulfport last week, and will be loaded by the Reeves-Powell Lumber Co. with 2,000,000 feet of lumber.

The Baltimore Sash & Door Co. has let contract to McIver & Piel at \$12,000 for the erection of buildings for its proposed factory. Equipment of machinery will cost \$60,000.

The Camden Lumber Co. of Camden, S. C., has been chartered, with a capital stock of \$10,000. The officers of the company are J. H. Burns, president; Henry Savage, vice-president, and J. J. Workman, secretary and treasurer.

E. H. Rosebury and F. C. Turner of Mobile, Ala., have purchased the Baird Lumber Co.'s plant in that city and organized the Enterprise Lumber Co. to continue the plant. A hardwood bandsaw mill will be erected in addition.

Lumber shipments on Friday last from the port of Jacksonville, Fla., amounted to about 2,000,000 feet, distributed as follows: Hopetown, 32,000 feet; Nassau, 40,000 feet; Cayenne, 210,000 feet; New York, 1,350,000 feet; Baltimore 411,000 feet.

The Gray Lumber Co., which owns and operates two large saw-mills at Pinebloom, on the Brunswick & Western Railroad, is having constructed a third mill at that place. The new mill will be used exclusively to saw boards, and will have a large output.

The W. H. Guirl Lumber Co., previously reported, has purchased a mill site at Memphis, Tenn., and will erect a first-class lumber plant. About \$125,000 will be expended, and the plant will be designed to manufacture quartered plain oak, cypress, hickory and oak wagon stock.

Messrs. M. T. Murphy & Co. have installed two machines near Laurel, Miss., for the manufacture of crossties from small trees and refuse logs. The firm is turning out 900 completed ties daily, and has contracts calling for 40,000 ties a month, and will shortly increase its capacity.

A fire which started in the mammoth dry-kilns of the Tunis Lumber Co. at Berkley, Va., last week destroyed ten of the kilns, with hundreds of thousands of feet of lumber ready for shipment. The loss is estimated at \$30,000 to \$40,000, which is covered by insurance. The kilns will be rebuilt.

Last week was a busy one at Pensacola, Fla., with lumber and timber handlers. In one day over 200 carloads arrived from interior points and were unloaded at the export docks, and almost every day special trains were run out to mills. The arrival of a dozen or more ships caused considerable activity in placing cargoes.

It is stated that J. W. Viers of Springdale, La., has succeeded in finding a desirable location for his spoke factory in Baton Rouge, having secured a lease from the Yazoo & Mississippi Valley Railway Co. of a site on that line. When completed this enterprise will have a capacity of 10,000 spokes a day. Building will commence on the plant as soon as the lease and other preliminaries can be effected.

The stockholders of the Kirby Lumber Co. met in adjourned session at Houston, Texas, last week for the election of directors, after the trip of inspection over the company's holdings. The following directors were elected: John H. Kirby, H. Baldwin Rice, Frank A. Reichardt, Theo. S. Wilkin and F. M. Aldridge of Houston, James Brown and C. Hunter Brown of New York, William Wiess and J. F. Keith of Beaumont. The board organized by electing the following officers: John H. Kirby, president; Frank A. Reichardt, vice-president; W. F. Faris, treasurer; F. A. Helbig, assistant treasurer; W. Nelson Shaw, secretary.

MECHANICAL.

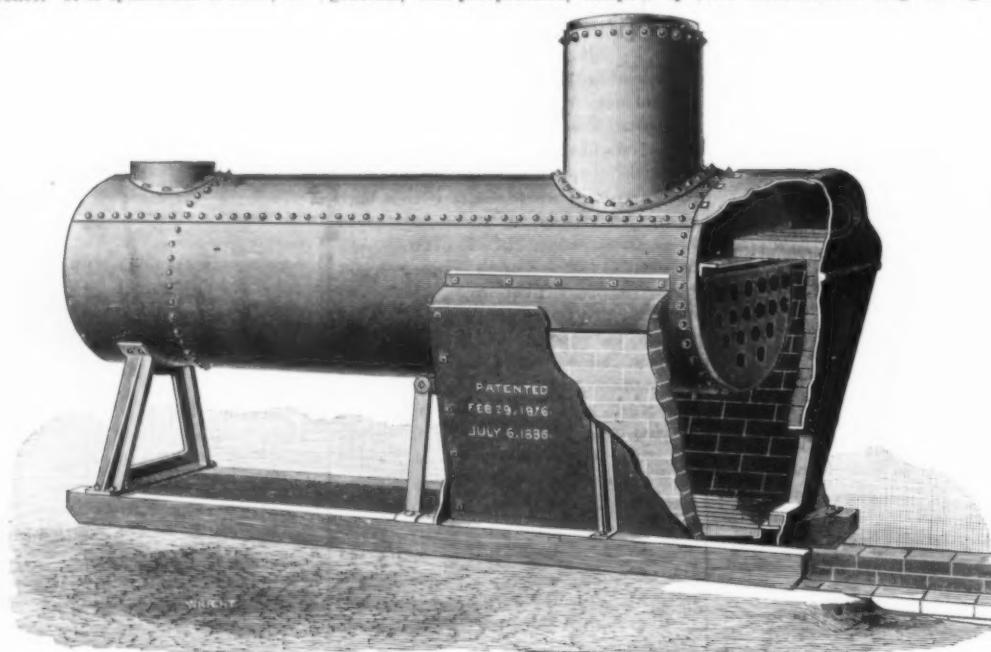
Improved New Era Boiler.

The New Era boiler has been on the market for fourteen years, and experience has proven it a safe and economical portable boiler. It is cylindrical in form, the

of extension type. The ram has long wide bearings in the column, with improved oiling facilities. Table, cross-rail and so on have all been given additional dimensions and weight, thus giving the machine as a whole a greatly-increased power and capacity, yet retaining its graceful, well-proportioned, compact ap-

pearance. The stroke is positive, and the length may be changed at will without stopping the machine. The index shown on the ram facilitates the setting of the stroke to the length desired. The rocker arm is pivoted near the base line, and this gives the ram an almost uniform rate of speed its entire stroke, and provides an exceedingly quick return. The back-gear ratio gives the tool exceptional power in taking heavy cuts. The rocker arm is of double-section pattern, permitting large-sized shaft to be passed under the ram, through the hole shown in the top of the column, for keyseating.

There are few power plants that are always full loaded, or, if full loaded, that will not stand a small additional overload. An establishment large enough to war-



THE IMPROVED NEW ERA BOILER.

upper half of the shell at the furnace end being extended to receive the front casting and form the combustion chamber. The principal draft is at the rear end of the furnace, and the products of combustion pass forward into the combustion chamber, and from there into the tubes. The furnace is lined with bricks of ordinary shapes, and the lining may be renewed at any time with ordinary brick. The sloping sides of the furnace serve to keep the bricks in position, and accomplish a valuable economical purpose by reflecting the heat of the furnace against the part of the boiler which extends into the furnace.

In the New Era boiler the lining of the furnace and combustion chamber, being of fire-brick, is raised to a very high temperature, say 1500 to 2000 degrees, and when fresh fuel is thrown in the gases set free pass forward and into the combustion chamber, and from thence into the tubes; during all this time being surrounded and brought into immediate contact with the fire-brick at this high temperature, almost perfect combustion of gases is attained, so that little or no smoke comes out of the stack, and economy of fuel is the result. Any kind of fuel can be used, and it combines with the safety of a stationary boiler the convenience and portability of a portable boiler. In this boiler but one seam is exposed to fire.

It is manufactured by the Liddell Company, Charlotte, N. C., for whom W. H. Gibbes & Co., 804 West German street, Columbia, S. C., are sales agents. Messrs. Gibbes & Co. have recently booked orders from firms in Oklahoma, New York, and numerous orders from points nearer home.

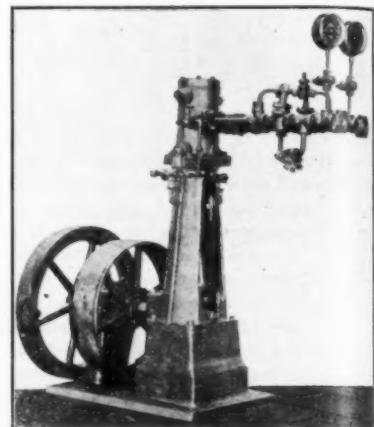
Crank Shaper.

The crank shaper shown herewith is the latest production of the American Tool Works Co. of Cincinnati, Ohio. This shaper is a thoroughly modern tool throughout, and much heavier and stronger in every way than former models. The column is of unusual depth and width, tapering slightly from base to top, adding to the solidity as well as the graceful appearance of the machine. The base

is strong enough to support a power plant is large enough to use an appreciable quantity of ice. The question of how to use that otherwise wasted power and how to lessen the ice bill may be answered by the same remedy; that is, by installing an ice plant or refrigerating establishment. The power available may be very small, but one-half horse-power is sufficient to operate a 100-pound plant. The owner may install an outfit only large

ice to his neighbors and fellow-townsmen. There are many large families and small boarding-houses, clubs, cafes and similar establishments where a considerable quantity of ice is daily consumed, and yet where it is not profitable to install a large plant.

The Hunt Foundry & Machine Co., Frick Building, Pittsburgh, Pa., has a very interesting outfit, just suited to such requirements. This is small, compact and durable. They are made in sizes running from 100 pounds to fourteen tons capac-

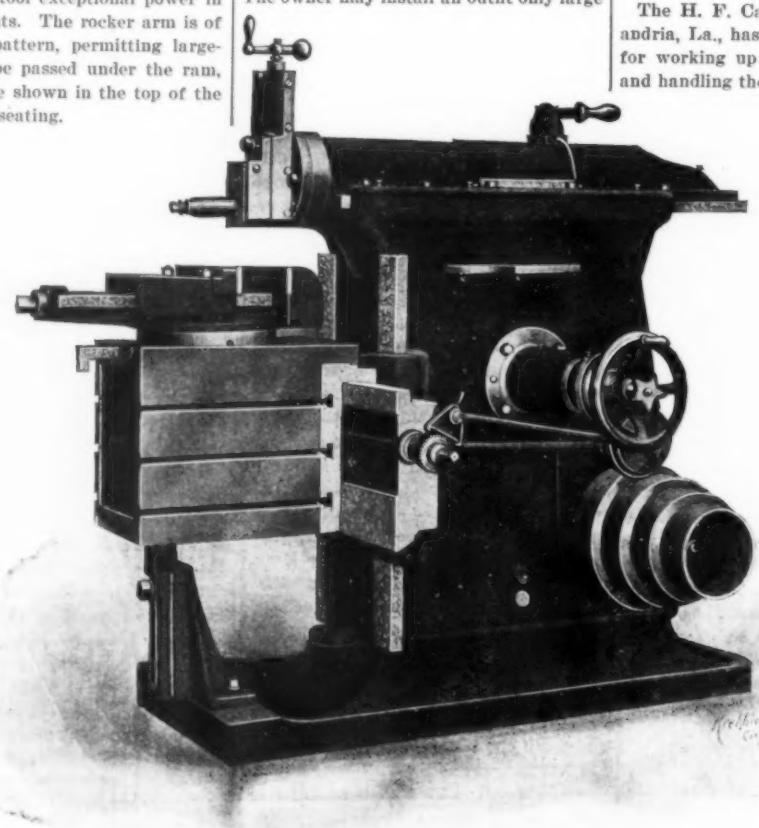


SMALL ICE PLANT.

ity, and, with the exception of the smallest outfit, 100 pounds, may be belt-driven or direct-connected. This firm makes a compressor, which it styles the "Baby," manufacturing 100 pounds of ice daily. This little outfit is especially adapted to the needs of moderate consumers; is small and compact, does not require the presence of a skilled operator, and may be driven by steam, electricity or gas.

These machines have few wearing parts, and these are readily accessible and adjustable.

The H. F. Cady Lumber Co. of Alexandria, La., has completed a planing mill for working up its own cypress product and handling the lumber product of near-



CRANK SHAPER.

This shaper is convenient, easy and smooth in operation, and is susceptible to fine and positive adjustments while under full speed, giving it especial value in the exacting requirements of the toolroom. These are made in 10-inch single-geared,

enough for his own use, or if at certain times during his run the load is light, he may install a plant sufficiently large to utilize the surplus power, shutting down the ice machinery during the periods of heavy load and disposing of the surplus

by yellow-pine mills. Six and one-half acres of land were purchased for site, and a complete modern equipment of machinery has been installed in the mill. The company now has about 2,000,000 feet of cypress in piles.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD
seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Bessemer—Water-works.—City engineer is completing the plans for water-works mentioned several weeks ago. Address "The Mayor."

Birmingham—Railroad Shops.—It is reported the Southern Railway will build shops at Birmingham, and that plans and specifications have already been prepared. The plans, it is said, provide for eight brick buildings, each 100x400 feet. A site has been bought at \$49,000; W. W. Finley, second vice-president, Washington, D. C.

Deposit—Cotton Gin.—J. E. McCaleb will rebuild his burned cotton gin and press.*

Eufaula—Brick Works.—Eufaula Brick Manufacturing Co. will rebuild its burned brick works; loss was \$10,000.

Henryellen—Iron Mines.—Tennessee Coal, Iron & Railroad Co. (offices at Birmingham) has not begun developing its iron properties near Henryellen (as reported last week); it was prospecting outcrop in that vicinity, but there is no present intention of opening up mines.

Huntsville—Excelsior Factory.—Thomas B. Wade will establish an excelsior factory.

Jasper—Lumber Plants.—Neil Brown of Wausau, Wis.; David A. Rose of Milwaukee, Wis.; J. H. Koehler and Charles J. Winton of Arkansas and others have purchased 30,000 acres of timber land near Jasper. They intend to organize a company to build lumber plants on the land and cut the timber.

Mobile—Lumber Plant.—Beekman Lumber Co. will enlarge its lumber plant.

Mobile—Saw-mill.—H. Parker proposes erecting a mill to saw 20,000 feet of hardwood daily.

Mobile—Lumber Plant.—E. H. Rosebury and F. C. Turner have purchased Baird Lumber Co. plant and organized Enterprise Lumber Co. to continue the plant. A hardwood band-saw mill will be erected in addition.

Montgomery—Stove Foundry.—Commercial and Industrial Association is endeavoring to meet a proposition of a Northern company for the establishment of a \$600,000 stove foundry; Alex. Rice, president.

Paint Rock—Coal Mines.—It is rumored

that Irwin Whitaker will arrange for the development of coal mines.

Standifer Springs—Distillery.—Spoon Mollow of Lynchburg, Tenn., will establish distillery of thirty bushels capacity daily at Standifer Springs.

ARKANSAS.

Batesville—Fruit Company.—Chartered: Batesville Fruit Co., capital stock \$3000, and W. P. Jones, president; E. L. Givens, vice-president; John Q. Wolf, secretary.

Hoxie—Electric-light and Water Works.—S. C. Dowell and S. Riegler of Walnut Ridge and J. D. Goldman of St. Louis, Mo., have franchises for construction of electric-light and water plants. They will organize company with capital of \$75,000 to build the plants.

Lake Village—Bottling and Ice Plant.—Arkansas & Texas Consolidated Ice & Coal Co. of Pine Bluff, Ark., will establish ice plant at Lake Village; will erect building 45x100 feet to accommodate the machinery; will also install bottling equipment.

Little Rock—Ice Plant.—Retail Grocers' Co. has received plans for the \$3000 building in which will be installed its ice-making equipment. This latter will cost about \$20,000. A. T. Thompson prepared plans.

Magnolia—Electric-light Plant.—It is rumored that Davis & Moore will build an electric-light plant.

Mena—Telephone System.—Chartered: Kizer Telephone Co., capital stock \$50,000, to build and operate telephone lines in the counties of Miller, Little River, Sevier, Howard and Polk. A. J. Kizer is president, and I. M. Davis, secretary.

Noble Village—Irrigation System.—J. S. Bell of Pine Bluff, Ark.; J. F. Simmons, Louis Roth, Charles Triplett and others propose the construction of an irrigation system to reclaim 50,000 acres of agricultural land.

Texarkana—Ice Manufacturing.—Texarkana Ice Co. is increasing capital stock from \$100,000 to \$150,000.

FLORIDA.

Brooksville—Electric-light Plant and Telephone System.—Standard Pole & Tie Co. reported last week as having received telephone and electric-light franchises, will establish the plants, and has engaged W. L. Flemming as engineer in charge. No contracts have been let. Company has New York offices at 44 Broad street.*

Jacksonville—Ice Plant.—It is proposed to organize a \$25,000 stock company to build a 25-ton ice plant. R. H. MacMillan can give information.

Jacksonville—Viaduct.—Hildreth & Co. have prepared plans and specifications for construction of proposed viaduct by Atlantic Coast Line and associates; J. R. Kenly, general manager, Wilmington, N. C.

Port Orange—Fiber Factory.—Prof. James Graham of Brooklyn, N. Y., will establish at Port Orange a fiber factory to extract from palmetto a material used in making high explosives.

St. Petersburg—Sewerage System.—City has decided upon the construction of a system of sewerage. Plans and specifications are now on file, and proposals for construction are solicited. Grant J. Aiken, city clerk; J. P. Titcomb, city engineer.*

GEORGIA.

Augusta—Levee Work.—Nisbet Wingfield, commissioner of public works, is engineer in charge of the proposed levee work referred to last week. Estimated cost is \$75,000. Bids will probably be asked early in 1903.

Barnesville—Knitting Mill.—Incorporated: Gem Knitting Mills, capitalized at \$30,000, to continue plant formerly operated by Hanson-Crawley Company; J. P. Thurman, J. L. Kennedy and others, incorporators.

Blue Ridge—Talc Mines.—W. G. McNelly of Canton, Ga., and associates contemplate developing talc mines near Blue Ridge.

Bullochsville—Orchards.—F. A. Stranahan of Cleveland, Ohio; J. J. Stranahan of Bullochsville and associates have purchased 1000 acres of land on Pine mountain, and will cultivate same, plant orchards, etc.

Columbus—Pottery.—W. H. Young, G. J. Peacock and W. J. Bickerstaff have organized a \$15,000 stock company for manufacturing clay products of all kinds. It is proposed to build a pottery at first.*

Gainesville—Broom Factory.—A. P. Long-

don of Demorest, Ga., proposes establishing a broom factory at Gainesville.

Griffin—Cotton-oil Manufacturing.—Griffin Oil Co., with capital stock of \$50,000, for manufacturing cottonseed oil, fertilizers, etc.; Edwin H. Ferguson and R. C. Wagener of Louisville, Ky., and Dan H. Hickey of Madison, Ga., incorporators.

Nicholls—Syrup Mill.—J. M. Jardine proposes forming company to build sugar-cane syrup mill.

Pineblow—Saw-mill.—Gray Lumber Co. of Waycross, Ga., will erect an additional saw-mill at Pineblow.

Rome—Electric-power Plant.—City Electric Railway Co. is reported as contemplating the expenditure of \$250,000 to erect another power plant and otherwise improve its system. Seymour Cunningham of Washington, D. C., is president.

Savannah—Cotton-oil Mill.—P. D. Daflin's Son & Co. contemplate building a cotton-seed-oil mill.*

Villa Rica—Electric-light Plant.—Charles M. Griffin and associates propose the erection of an electric-light plant.

Washington—Copper Mines.—Seminole Mining Co. has begun mining copper ore on its mineral tract near Washington.

Waycross—Car Works.—Satilla Manufacturing Co. will erect additional buildings and install new machinery to improve and increase capacity of its car-works addition.

KENTUCKY.

Bowling Green—Telephone System.—Home Telephone Co. is preparing to begin construction of its underground telephone system, for which franchise was recently granted.

Carrollton—Cannery.—M. I. & R. M. Barker will establish cannery.

Hopkinsville—Lumber Plant.—G. B. Sisk Lumber Co. will build lumber mill, furniture factory, bending plant, etc. Address Commercial Club.

Lexington—Electric-light and Power Plant.—Bluegrass Traction Co. has voted an increase of capital from \$10,000 to \$350,000 to make improvements that include the erection of plants to supply electric light and power to towns.

Louisville—Asphalt Paving.—Barber Asphalt Co. has received municipal contract for \$7400 worth of asphalt paving.

Louisville—Woolen Mill.—John T. Moore of Louisville and Chas. F. Murphy of Boston (both of Hope Worsted Mills) will establish another worsted mill. They will erect building three stories high, 80x200 feet, to cost about \$30,000; will install machinery to cost nearly \$100,000.

Louisville—Improvement Company.—Incorporated: Realty Improvement & Securities Co., with a capital stock of \$10,000, by Walter S. Adams, Charles D. Adams and Alonso Adams.

Madisonville—Electric-light Plant.—It is rumored Bailey Light & Water Co. will make improvements to its electric-light plant.

Madisonville—Electric-light Plant.—City is investigating the advisability of erecting an electric-light plant, and an engineer has been engaged to make a preliminary report. Address "The Mayor."

Madisonville—Coal Mines.—W. L. M. K. and J. F. Gordon have organized Gordon Land Co., with capital stock of \$5000, to develop coal lands.

Owenton—Telephone System.—Chartered: Owenton Telephone Co., capital \$7500, by June W. Gayle, J. W. Cammack and J. A. Johnson.

LOUISIANA.

Alexandria—Lumber Plant.—H. F. Cady Lumber Co. has completed a plant for planing cypress lumber, etc.*

Baton Rouge—Spoke Mill.—J. W. Viers of Springdale, La., will build a spoke mill of 1000 daily capacity at Baton Rouge.

Jefferson Parish—Agricultural Developments.—J. E. Hartenbower of Tonica, Ill.; H. T. Shaw and Gervais Lombard of New Orleans have purchased and will develop a large tract of agricultural land in Jefferson parish. They will organize the Old Plantation Co.

Jennings—Mercantile.—E. F. Walker Dry Goods Co., Ltd., capitalized at \$20,000, has organized; E. F. Walker, president; E. B. Walker, vice-president; Ethel P. Shear, secretary.

Lake Charles—Irrigation Canal.—Fresh Water Canal Co., reported incorporated lately, will expend about \$200,000 on the construction of its proposed irrigation canal. Frank Shuts is the engineer in charge. J. E. Glisson is secretary.*

Lafourche Parish—Irrigation System.—The Illinois capitalists recently mentioned as to construct irrigation systems in Lafourche parish have incorporated a company, with capital stock of \$250,000, to undertake the work. W. H. Junk of Dix, Ill., is president-manager.*

Shreveport—Harbor Work.—Government has awarded contract to Hunter & Frey of Memphis, Tenn., at \$27,000 for harbor work at Shreveport.

Welsh—Oil Pipe Line.—Welsh Oil & Development Co. has decided to build its proposed oil pipe line; will also erect additional tanks, etc. L. E. Robinson is president.

Welsh—Oil Wells.—Chartered: Merchants' Oil Co., capitalized at \$500,000, for the purpose of developing oil and other minerals on 320 acres of land; John C. Lee, president; F. G. Stevens, vice-president, and Jacob L. Keller, secretary.

MARYLAND.

Baltimore—Sash and Door Factory.—Baltimore Sash & Door Co. has let contract to McIver & Piel at \$12,000 for erection of building for its proposed factory. Equipment of machinery will cost \$60,000.

Baltimore—Excelsior Machine Works, etc.—American Excelsior & Machine Co. will double its plant for making excelsior machines and excelsior; offices in Continental Trust Building.

Baltimore—Glass Works.—Chartered: Atlantic Glass Works, for manufacturing medical, surgical, chemical and other glass vials, by Ellis Micheau, Edward H. Letzer, William Little, Albert Marx and Charles J. Hull. The capital stock is \$10,000.

Baldwin (P. O. at Elkhorn)—Textile Mill.—Baldwin Manufacturing Co. will build a textile mill; stone building 80x100 feet will be erected. Character of product not stated.

Colora—Fiber Factory.—R. L. Christie will at once organize the fiber-working company mentioned last week, and will manufacture such cases, trunks, etc., from vulcanized fiber.

Cumberland—Tea Company.—Chartered: Home Tea Co., with capital of \$10,000; W. T. Coulehan, president; M. J. Sullivan, secretary-treasurer; William E. Walsh, S. T. Dixon, D. F. Roland and H. E. Weber, directors.

Oakland—Coal Mines.—W. McCulloch Brown, Fred A. Thayer and Edward H. Sinclair of Oakland, Russell S. Hubbard and Harris M. Datesman of Philadelphia, Pa., have incorporated the Upper Potomac Coal Mining Co., with capital stock of \$20,000, to develop coal mines in Garrett county.

Sparrow's Point—Electric Plant.—Sparrow's Point Railway Co. has let contract to John Waters of Baltimore for erection of building for its power-house; structure will cost \$10,000.

Washington, D. C.—Roller Bearings Works. W. J. Brewer Engineering Co. will be reorganized, with a capital of \$1,000,000, to extend facilities for manufacturing and introducing its patent self-contained roller bearings; offices at No. 37 Atlantic Building; W. J. Brewer, president, in charge.

MISSISSIPPI.

Bay St. Louis—Electric-light Plant.—City proposes issuing \$3000 in bonds for the erection of an electric-light plant. Address "The Mayor."

Dundee—Brick and Tile Works.—A \$10,000 stock company has been organized to establish brick and tile works. O. E. Miller of Champaign, Ill., is said to be interested.

Latonia—Lumber Plant.—D. C. Bacon Lumber Co. has been organized and will incorporate with \$75,000 capital paid in, and privilege of increasing to \$500,000. Plant will be erected, work to begin at once. De Witt C. Bacon, W. A. Shipman, J. F. Payne, Milton Bacon and W. B. Gillican are the incorporators.

McComb City—Land Improvement.—Chartered: Epstein Land & Improvement Co., by A. Epstein, C. Epstein and others; capital stock \$50,000.

Meridian—Paint Works.—Meridian White Lead and Color Works has been organized and completed the establishment of a plant. F. A. Gallagher is manager.

Meridian—Water-works.—City has received plans and specifications for its proposed water-works recently mentioned, and will call for bids on construction. Address "The Mayor."

MISSOURI.

Central City—Mining, etc.—Chartered: Lamar Milling & Mining Co., capital \$4800, by George Horning, J. H. Fletcher, B. Powell and others.

Farmington—Electric-light and Ice Plants. Farmington Electric Light & Ice Co. will remodel its electric-light and ice plants. Laukett-Bendit M. E. Co., 714 Wainright Building, St. Louis, has been appointed consulting engineer.

Kansas City—Planing Mill.—Chartered: Kansas City Mill Works, capital \$35,000, by James Muir, Charles H. Roof and Harry E. Calvin.

Kansas City—Brewery.—Imperial Brewing Co. will increase capitalization from \$250,000 to \$550,000 in order to enlarge and improve its plant.

Linneus—Electric-light Plant.—City will establish an electric-light plant. Address "The Mayor."

St. Louis—White-lead Plant.—Rowley Lead Co. will establish a white-lead plant at Theresa avenue and the Wabash Railroad tracks. Capital stock is \$250,000.

St. Louis—Construction Company.—Chartered: Superior Construction Co., capital \$2100, by N. S. Wood, George Sauerbraun and George G. Chapline.

St. Louis—Vacuum Caps.—Chartered: Evans Vacuum Cap Co., with a capital of \$50,000, by J. H. Simpson, A. H. Duncan, W. H. Everett and J. M. Blake.

St. Louis—Shoe Factory.—Chartered: Crown Shoe Manufacturing Co., with a capital of \$6000, by Emil J. Peteter, Fred W. Roedter and Louise M. Peteter.

St. Louis—Iron and Steel Works.—Incorporated: Henry Steel Casting Co. and Henry Truss-Rod Beam Co., each with a capital of \$300,000, by A. W. Henry, J. M. Sutherland, Morse B. Schaffer, S. H. West, V. O. Saunders, James Wilson and S. G. Stone.

St. Louis—Oil Refinery.—Chartered: Graf Oil Refining Co., with a capital of \$10,000, by Anton Graf, Henry Luedinghaus, August H. Reller, A. F. Reller and others.

St. Louis—Malleable Castings.—Incorporated: St. Louis Malleable Casting Co., with a capital of \$25,000, by George J. Kobush, Charles G. Ette and H. C. Duggan.

St. Louis—Clothing Factory.—Chartered: Scharff Manufacturing Co., capital stock \$5000, by Arthur A. Scharff, Walter Weaver and L. Scharff, to manufacture clothing.

St. Louis—Mineral-water Factory.—Chartered: Bonita Water Co., with a capital of \$800,000, by James S. Owens, Charles A. Hantz and Charles E. Hannauer, to manufacture and deal in distilled and mineral waters.

NORTH CAROLINA.

Graham—Overall Factory.—It is said Scott-Mebane Manufacturing Co. will erect additional overall factory.

Greensboro—Gold Mines.—Fentress Mining Co. has been organized, with capitalization of \$1,000,000, and will develop the Fentress gold mines property, which James V. Bruyn of Kingston, N. Y., has been operating for several years. Henry J. Dexter of New York is president; James V. Bruyn, treasurer; Robert D. Douglass of Greensboro, special counsel, and Wilkins M. Greene, general manager at Greensboro. Stamp mills and other modern machinery will be installed. Company has offices at 52 Broadway, New York.

Greensboro—Gold Mines.—Pine Hill Mining Co. will increase capital stock to \$1,000,000, and will make improvements at its gold mines. It is contemplated to erect a 100-ton plant at a cost of \$200,000. F. A. Silver is manager.

Hickory—Medicine Factory.—Chartered: Radical Remedy Co., capital stock \$100,000, to manufacture various remedies; incorporators, J. L. Riddle, J. D. Elliott, A. A. Shuford, K. C. Menzies, E. B. Cline, George R. Wooten, C. M. Sherrill, George E. Bessonier and W. B. Mengles.

High Point—Wheel Factory.—George Briggs and R. E. Briggs of Amesbury, Mass., and J. Elwood Cox of High Point propose organizing company to establish a carriage-wheel factory.

Raleigh—Tobacco Stemmeries, etc.—C. B. Barbee, Frank Stronach, B. S. Jerman and others have incorporated Oak City Warehouse & Investment Co., with capital stock of \$50,000, for the purpose of building tobacco stemmeries, prizeries, etc.

Stoneville—Flour Mill.—George Mitchell will build flour mill.

Washington—Ice Plant.—Crystal Ice Co. reported last week with \$100,000 capital, will continue an established enterprise heretofore not incorporated.

Winston—Tobacco Factory.—C. R. Makepeace of Providence, R. I., who drew plans for the new factory of R. J. Reynolds Tobacco Co., is conferring in regard to plans for another leaf house. The building will be about 60x200 feet of brick.

SOUTH CAROLINA.

Anderson—Cotton Mill.—Orr Cotton Mills, mentioned last week as to enlarge, will act in January on a recommendation of the directors to add 30,000 spindles and 800 looms. The extension will probably be authorized, and J. E. Sirrine of Greenville, S. C., will be the engineer. Present plant has 25,000 spindles and 700 looms.

Camden—Lumber Mill.—Incorporated: Camden Lumber Manufacturing Co., capitalized at \$10,000, with J. H. Burns, president; Henry Savage, vice-president, and J. J. Workman, secretary.

Charleston—Planting, etc.—Chartered: Uxbridge Company, to engage in planting, stock-raising, mining, manufacturing and merchandising; capital stock \$3000. The corporators are B. H., S. E. and C. R. Brown.

Charleston—Rice Company.—Chartered: Atlantic Rice Co., capital \$60,000; A. M. Mangault, president, and Julian Mitchell, Jr., secretary.

Cheraw—Seed Farm.—Chartered: Excelsior Seed Farm, to cultivate cotton and corn seed, and seed for other agricultural products, as well as raise improved stock. The capital is \$10,000. C. F. Moore is president, and W. F. Stevenson, secretary.

Columbia—Improvement Company.—R. E. Cullinan, W. B. Stovall, F. M. Sisk and M. B. Lipscomb have chartered Fulton Realty & Improvement Co. The capital stock is \$100,000.

Columbia—Mining, etc.—Chartered: Georgia Real Estate & Mining Co., with capital stock of \$50,000, by F. H. Hyatt, W. J. Murray, C. W. McCreary and Andrew Crawford.

Conway—Mercantile.—Chartered: Hal. L. Buck Company, capital stock \$20,000, by Hal. L. Buck, G. V. Buck and R. B. Scarborough.

Easley—Publishing.—Chartered: Easley Publishing Co., capital stock \$2000; D. F. Bradley, president; J. M. Geer, vice-president, and J. T. Lathern, secretary.

Hartsville—Publishing.—Chartered: Hartsville Publishing Co., capitalized at \$4000, to publish a newspaper and conduct printing plant; incorporators, T. J. Drew of Darlington, S. C.; J. J. Lawton, M. S. McKinnon and D. R. Coker of Hartsville.

Landrum—Knitting Mill.—Blue Ridge Hosiery Mills will increase capitalization from \$20,000 to \$40,000 in order to enlarge plant.

Laurens—Ginney and Ice Plant.—J. Wade Anderson contemplates erecting a cotton ginney and an ice plant.*

Stantonville—Cotton Mill.—E. A. Smyth of Pelzer, S. C., states that there is no foundation for the report, mentioned last week, that he and R. A. Lewis of Belton, S. C., will erect a cotton mill at Stantonville.

St. George's—Furniture Factory.—Elias Doar and associates of Summerville, S. C., contemplate establishing furniture factory for cheap and middle class goods.*

TENNESSEE.

Brownsville—Chemical Company.—John A. Cathey, N. R. Dupree, W. W. Wagner, H. W. Stratton and S. J. Chapman have organized Twentieth Century Chemical Co., with capital stock of \$500,000.

Bryant Station—Pencil Factory.—Scott & Hutton of Shelbyville, Tenn., have bought a tract of cedar timber land near Bryant Station for \$40,000, and will erect, it is reported, a pencil factory.

Clinton—Zinc Mines.—New Prospect Zinc Co. has completed the purchase of zinc properties near Clinton, and will develop same. It is said \$75,000 was paid for the lands. J. E. Hardin is manager.

Gainesboro—Tobacco Factory.—J. T. Anderson and associates contemplate building tobacco factory.

Hohenwald—Lumber Plant.—W. J. Cude of Kimmins, Tenn., has purchased and will continue the plant of the Caldwell Lumber Co. at Hohenwald. A tract of 4500 acres of timber land is included in the sale.

Isoleine—Coal Mines, etc.—James A. Dunn, H. C. Staggers and others of Pennsylvania have purchased 6000 acres of coal and timber land near Isoleine for \$60,000. They will form company to open coal mines and probably develop the timber interests also.

Jackson—Ice Plant.—Consumers' Ice Co. will double its ice plant.

Jellico—Powder Works.—Chartered: Jellico Powder Works, with \$15,000 capital stock, by John T. Moore, John Stones, A. Gatlin, U. S. Jones and Phillip Frances.

Johnson City—Furniture Factory.—W. J. Exum will build a furniture factory.

La Follette—Glass Works.—T. M. Hunt of Dunkirk, Ind., proposes organizing a cooperative company for the establishment of glass works.

Lawrenceburg—Electric-light and Water Works.—City proposes calling an election to vote on issuing bonds for an electric-light plant and water-works. Granberry Jackson of Nashville has been engaged to make plans and specifications. Address "The Mayor."

Memphis—Hardware.—Benedict, Warren & Davidson Hardware Co. has been chartered, with \$100,000 capital, to deal in hardware, wholesale; R. D. Warren, president; N. Benedict, vice-president, and G. L. Davidson, secretary.

Memphis—Lumber Plant.—W. H. Guirl of Clay City, Ind., reported last week as to erect lumber plant at Memphis, will expend about \$125,000 on the enterprise. Contracts for the machinery have been awarded. Oak, cypress and Hickory lumber will be manufactured, and oak wagon stock also. F. D. Mannocci, 154 Randolph Building, Memphis, is the manager.

Memphis—Cold-storage Plant.—W. J. Lemp Brewing Co. (main offices in Cincinnati, Ohio) has awarded contract to F. B. Young at \$13,000 for erection of building for its proposed cold-storage plant.

Nashville—Chewing-gum Factory.—Chartered: Maer Gum Co., with a capital stock of \$30,000, by R. M. Maer, M. L. Allen, J. B. Martin, W. S. Hubbard and R. Houston Dudley, Jr., to manufacture gum, candy and confections.

Nashville—Snuff Factory.—American Snuff Co. has purchased site at \$250 for purpose of erecting an addition to its factory.

Nashville—Brick Plant.—E. T. Lewis Co. reported last week as to establish brick plant, has incorporated, with capital stock of \$30,000, by E. T. Lewis, A. J. Dyer, H. F. Sinnott, J. C. Spence and C. C. Trabue. Engineer in charge is W. W. Southgate.

Nashville—Drug Company.—Incorporated: Hargis Drug Co., capital stock \$5000, by J. B. Hargis, P. K. Ramsey, A. A. Pierce, J. E. Mayhill and H. L. Miller.

Nashville—Piano Company.—Chartered: Rosenblatt Piano Co., with \$6000 capital stock, by W. N. Hanff, W. L. F. Rosenblatt, C. Boggs, James Hudson and F. O. Rosenblatt.

Nashville—Marble Company.—Chartered: Meadow Marble Co., with a capital stock of \$30,000, by T. S. Godfrey, J. O. Brown, John R. Cox, J. C. Thomas and H. H. Taylor.

Soddy—Coal Mines, etc.—Soddy Coal Co. has completed the purchase of the properties of the Sale Creek Coal & Coke Co., and will develop same. Surveys are now being made of the coal lands and mines, and probably additional machinery will be installed. W. H. Wigton is engineer in charge.

Vernon—Iron Mines.—Spring Creek Mining Co., reported chartered recently (under Nashville) with \$5000 capital, will develop iron mines and is doing the preliminary work. H. W. Brennan is in charge.

Angleton—Publishing.—Chartered: Angleton Publishing Co., capital stock \$1700, by J. W. Saxon, W. W. Hoskins, W. R. Stockwell and others.

Austin—Printing Plant.—Incorporated: Von Boeckmann-Jones Co., capital stock \$75,000, to conduct a lithographing, printing and publishing business; incorporated by R. Von Boeckmann, Henry Schutze, J. F. Fricke, Ben C. Jones, V. A. Fenner and R. H. Cousins.

Beaumont—Iron Works.—Neches Iron Works has begun construction of larger buildings for its plant. New structures will be 40x90 feet for foundry and 30x80 feet for pattern shops. Various other improvements are also to be made upon the removal of the equipment of machinery.

Beaumont—Oil Wells.—Chartered: Golden State Oil Co., capitalized at \$50,000, for developing oil lands; incorporators, M. Kaltenbach and F. Boehmer of Alameda, Cal.; E. Kaltenbach, Albert Kaltenbach and T. W. Shepherd of Beaumont.

Beaumont—Soap Factory.—E. A. Luck contains establishments establishing a soap factory.*

Bridgeport—Woodworking Plant.—Houston & Liggett of Columbia, Texas, will establish a plant for making insulator pins and wagon fellows from bois d'arc wood at Bridgeport.*

Danville—Publishing.—Chartered: Bee Publishing Co., capitalized at \$5000, to publish the Evening Bee; Louis E. Pepper, president, and Christopher Arrington, secretary.

Elk Creek—Knitting Mill.—T. L. Gwynne contemplates establishing a hosiery mill.*

Lynchburg—Water-works.—City has obtained the preliminary surveys, recently mentioned, for proposed system of water-works by gravity, and will order estimates prepared. Address "The Mayor."

Morrisville—Gold Mines.—It is reported that Mr. Petro has organized a company of

Celeste—Cotton Mill.—E. F. Adams, F. B. Norris, C. J. Barnard and others have incorporated Perrin Cotton Mills, with capital stock of \$75,000, for manufacturing cotton goods, etc.

Dallas—Piano Manufacturing.—Chartered: Russell Piano Manufacturing Co., capital stock \$50,000, to manufacture and sell pianos; incorporated by C. C. Russell of Chicago, Ill.; Kirk Hall, Jr., England; J. D. Robinson, R. B. Allen, all of Dallas; T. W. Menefee of Gonzales and S. S. Beakley of Seguin, Texas.

Dallas—Electric-light and Power Plant.—It is rumored that P. DeC. Ball of St. Louis, Mo., and C. L. Wakefield of Dallas, Texas, contemplate organizing company to establish electric-light and power plant.

Dallas—Printing Plant, etc.—Dorsey Printing Co., reported incorporated with \$200,000 capital last week, is to occupy building 50x200 feet, six stories high, and will manufacture stationery, lithographing, blank books, etc.

El Paso—Candy Factory.—Chartered: Rogers Candy & Manufacturing Co., capital stock \$20,000, by J. J. Spier, R. T. Rogers and B. A. Gravis, for manufacturing confections, carbonated waters, etc.

Fort Worth—Live-stock.—Chartered: Southwestern Live-Stock Commission Co., capital stock \$100,000, by Mayer Half of San Antonio, Texas; Martin Sansom of Alvarado, Texas; S. B. Bennett, C. L. Ware, Sam Davidson, John Scharhaner, all of Fort Worth, Texas, and others.

Fort Worth—Chemical Company.—Incorporated: National Chemical Co., capital stock \$10,000, by John C. Phelan, J. O. Wright and John W. Wray.

Gainesville—Telephone System.—Mr. McElroy has applied for telephone system franchise.

Granger—Water-works.—Granger Water Co. is reported as to improve and enlarge its water-works; W. H. Kelso, manager.

Hondo—Bridge.—County commissioners have appointed S. A. Oliver of Houston, Texas, to supervise construction of an iron wagon bridge. He will prepare plans, and then bids will be invited.

Houston—Telephone System.—Frank C. Smith of San Antonio, Texas, and H. E. Huntington of New York city have purchased Citizens' Telephone Co. and plant. They will improve the system.

Laredo—Mercantile.—Incorporated: Villagras Mercantile Co., capitalized at \$10,000, by Joaquin Villegas, Fernando Wormser, Julius Wormser and Quintin Villegas.

Paris—Ice Manufacturing.—Paris Ice Co. has amended charter, increasing capitalization from \$70,000 to \$140,000.

Quanah—Water-works.—City contemplates the construction of water-works. Address "The Mayor."

Terrell—Telephone System.—T. R. Bond of Terrell, C. T. McCreary of St. Louis, Mo., and R. W. Wortham of Paris, Texas, have received franchise for telephone system. They will incorporate company to carry out the terms of the franchise.

VIRGINIA.

Basic City—Engine Works.—Virginia Machinery Co. has been chartered, with capital stock of \$50,000, and will establish engine and general machinery works. Suitable buildings have been secured; J. A. Patterson of Waynesboro, Va., president; M. J. Fulton of Trout Royal, Va., vice-president, and T. A. Sammis of Basic City, secretary.

Erlistol—Water-works.—City will expend about \$25,000 to improve its water supply. Eight mountain springs flowing 500,000 gallons daily have been purchased; catch basins will be constructed, mains will be extended and other improvements will be effected. Address "The Mayor."

Clifton Forge—Printing Plant.—Incorporated: Review Printing & Publishing Co., with capital stock of \$10,000, to operate printing plant, etc. James B. Barker of Richmond, Va., is president, and George O. Green of Clifton Forge, manager.

Danville—Tobacco Stemming.—American Cigar Co. (main offices in New York) will establish tobacco stemming.

Danville—Publishing.—Chartered: Bee Publishing Co., capitalized at \$5000, to publish the Evening Bee; Louis E. Pepper, president, and Christopher Arrington, secretary.

Elk Creek—Knitting Mill.—T. L. Gwynne contemplates establishing a hosiery mill.*

Charlottesville—Charter Co., by Avis, J. operator.

Charlottesville—Ohio & Indiana Co. of

Baltimore (Md.) capitalists for the purpose of developing gold mines near Morrisville.

Norfolk—Cotton Mill.—Norfolk Yarn Mills, reported incorporated lately, leased and will operate established plant. Some additional machinery will be installed.*

Norfolk—Shipbuilding Plant.—It is stated Norfolk-Hampton Roads Shipbuilding & Dry-Dock Co. (previously mentioned at some length) has purchased at \$339,500 679 acres of water-front land as site for its proposed plant. The plant is to include dry-dock 1000 feet long, marine railway of 6000 tons capacity and general shipyards. Capital stock authorized is \$10,000,000, and it is stated \$4,000,000 is now available. Wm. P. Harrison of Cincinnati, Ohio, is president; W. H. Klauss, vice-president, and John T. Gamble, also of Columbus, secretary. Address company care C. W. Tebault.

Norton—Coke Ovens.—R. L. Brown and W. A. Head of Big Stone Gap, Va.; I. P. Kane of Gate City, Va., and others will organize a \$50,000 stock company to build 100 coke ovens near Norton.

Richmond—Grocery.—Incorporated: Virginia-North Carolina Grocery Co., capital stock \$20,000; president, Charles E. Lefew; general manager, R. E. Priddy; secretary, Leon Russel.

Richmond—Mercantile.—Incorporated: Leibermuth-Abrams Company, capital stock \$25,000; L. L. Leibermuth, president; Alfred Adams, secretary; R. A. Blinswanger, treasurer.

Roanoke—Machine Shops.—Rockhill Machine Co. has been incorporated, with capital stock of \$10,000; H. B. Rockhill, president, and C. B. Denit of Salem, Va., secretary. Company will own and operate the plant recently reported.

Staunton—Fertilizer Factory.—Virginia-Carolina Chemical Co. will establish fertilizer factory; main office at Richmond.

Stony Man—Copper Mines.—Virginia Consolidated Copper Co. (reported last week under Luray) is proceeding with the work of developing its copper properties, and will, after the mines are in modern working condition, erect mills and smelting furnace to treat the ores. T. A. Dunshee is general manager.

Williamsburg—Electric-light Plant.—It is contemplated to erect an electric plant for lighting the municipality. Address "The Mayor."

Williamson—Coal Mine.—Thomas B. Garner will develop a coal mine.

Wytheville—Telephone System.—Wythe County Mutual Telephone Co. has applied for franchise for telephone system.

WEST VIRGINIA.

Amos—Oil Wells, etc.—Chartered: Fairview Improvement Co., capital stock \$25,000, to drill for gas and oil. The incorporators are H. S. Yost, J. W. P. Jarvis, George W. Baker, J. Y. Hamilton and R. C. Price.

Berkeley County—Slate Quarries.—Shenandoah slate Co. has been organized, with John Lovett, president; John L. Edwards, vice-president, and F. M. Yerick, secretary, for developing quarries in Berkeley county. Contract for installation of plant has been awarded, and R. Parker Crenshaw is engineer in charge; offices at No. 18 Kellogg Building, Washington, D. C.

Bethany—Electric-light and Water Works.—Bethany Improvement Co., reported incorporated last week, will arrange for the construction of water-works and erection of an electric-light plant. Address care T. E. Crumblt.*

Bluefield—Coal Mines and Coke Ovens.—Chartered: Menonah Coal & Coke Co., with capital stock of \$150,000, to mine coal and manufacture coke. The incorporators are K. E. Harman and O. G. Shaw of Pulaski City, Va.; O. C. Jenkins of Bluefield, D. W. Barger of Shawsville, Va., and A. W. Reynolds of Princeton, W. Va.

Burnsville—Grocery.—Chartered: Burnsville Grocery Co., with a capital stock of \$100,000, by L. H. Morrison of Rock Cave, W. Va.; W. M. Day, G. F. Day, I. B. Westfall and A. K. Miller of Buckhannon, W. Va.

Cameron—Coal Mines.—Chartered: Benedum Coal Co., with a capital stock of \$200,000, by M. L. Benedum and C. Y. Benedum of Cameron, F. A. Deveny, W. H. Nicholson, Jr., and J. A. Clark of Fairmont, W. Va.; purpose, to open coal mines.

Charleston—Foundry and Machine Shop.—Chartered: Elk Machine Shop & Foundry Co., by Grant P. Hall, John A. Jarrett, S. C. Avis, J. F. Hudson and Ira Matteshead, to operate machine shop and foundry.

Charleston—Oil Wells, etc.—Chartered: Ohio & California Oil Co., with capitalization of \$5,000,000, for drilling for oil, estab-

lishing refineries, etc. Franklin R. Anson, Jerome L. Drumbeller, M. C. Cluson, G. C. Drumbeller and A. A. M. Herbert, all of New York, are the incorporators.

Charles Town—Blacksmith Shop.—James A. Thomas will erect building 34x54 feet and equip as a blacksmith shop.

Chester—Potteries, etc.—North American Manufacturing Co. has been incorporated by L. L. Aaron and C. I. Aaron of Allegheny, Pa.; Marcus Aaron of Pittsburgh, Pa.; W. E. Wells, E. M. Knowles, J. W. Taylor and others of East Liverpool, Ohio, for manufacturing potteryware, glassware, etc. The capital stock is \$1,000,000. Company has purchased for \$75,000 a tract of land near Chester, and will develop the property as a manufacturing site, and will also, it is reported, remove several East Liverpool (Ohio) potteries to the site.

Fairmont—Water-works.—City will build another reservoir and extend its water mains. Address "The Mayor."

Fairmont—Flour and Feed Mill.—Incorporated: Mountain City Mill & Power Co., for manufacturing flour and feed. The capital stock is \$100,000. Incorporators are W. E. Watson, W. L. Hutchinson, George De Bolt and M. A. Joliff.

Fairmont—Glass Manufacturing, etc.—Chartered: Sewickley Company, for manufacturing glass, iron, coke, lumber and other materials. The capital stock is \$200,000; incorporators, J. S. Rex, C. F. Baker, J. A. Showalter, W. E. Hagerty and A. D. Parish of Monongah, W. Va.

Fayetteville—Coal Mines.—New York capitalists have purchased 17,000 acres of coal lands near Fayetteville at \$425,000, and will develop the property. J. L. Beury of Fayetteville made the sale.

Gauley Bridge—Coal Mines.—Randolph Harrison, James E. Edmunds, J. S. Diggs and others, all of Lynchburg, Va., have incorporated Fayette Colliery Co. to open coal mines at Gauley Bridge. Capital stock is \$100,000.

Kingwood—Granite Ironware Works.—J. J. Wilson of Wheeling, W. Va., contemplates locating a \$100,000 plant at Kingwood for manufacturing granite ironware.

Mannington—Realty.—Chartered: Mannington Realty Co., capitalized at \$50,000, by J. T. Koen, E. A. Prichard and others.

Marlinton—Light and Water Plants.—Chartered: Pocahontas Water, Light & Power Co., capital stock \$25,000, by E. M. Arbogast, W. A. Bratton, F. H. Hunter and J. W. Price of Marlinton, and George C. Martin of Loweton, Pa.; purpose, to operate light, water and power plants.

Martinsburg—Construction Company.—Incorporated: Friend J. Hays Company, with a capital stock of \$100,000, by Friend J. Hays, I. D. Hays, E. E. Landis, W. H. D. Landis and L. O. Thomas.

Newburg—Coal Mines and Coke Ovens.—Hamilton Coal & Coke Co., reported last week with \$150,000 capital (under Frostburg), has begun development of its 2300 acres of coal lands. Mines have been opened and 200 tons are being shipped daily; 150 coke ovens have been erected. Irving Adams of Baltimore, Md., is president; C. Brotemarkle of Lonaconing, Md., secretary, and W. A. Somerville of Frostburg, Md., general manager.

New Martinsville—Furniture Dealers.—Chartered: Wharter-Ogden Company, capitalized at \$10,000, by Newton Ogden of St. Marys, W. Va.; W. E. Wharter and others of New Martinsville.

Parkersburg—Railroad Shops.—Baltimore & Ohio Railroad Co. will enlarge its Parkersburg shops. G. L. Potter of Baltimore, Md., is general manager.

Pruntytown—Coal Mines.—John Robinson Coal Co. has begun the development of coal mines.

Valley Falls—Coal Mines.—Pennsylvania capitalists have purchased 5000 acres of coal lands for \$100,000, and will arrange for full developments of the property. Charles R. Durbin of Grafton, W. Va., and Lloyd Cannon of Valley Falls made the sale.

Welch—Coal Mining and Coke Manufacturing.—Chartered: Vaughan Coal & Coke Co., with a capital stock of \$50,000, to mine coal and manufacture coke. The incorporators are J. L. Vaughan of Roanoke, Va.; E. H. Sudduth, D. L. F. Strother, S. J. Johnson and James Strothers of Welch, W. Va.

Weston—Lead Mines.—It is rumored that Peter A. Hitt will arrange for the development of lead-ore deposits on his farm.

Wheeling—Electric and Ice Plant.—Schmidbach Brewing Co. has let contract for additional machinery required for improvements at its plant; \$50,000 will be the cost of additional ice machines and \$6000 that of plant for furnishing electric light and power.

INDIAN TERRITORY.

Chickasha—Gravel Cement Works.—Chickasha Gravel Cement Co., referred to last week, will test gravel deposits and then establish plant; L. W. Sanders, secretary.

Vinita—Coal Mines, etc.—Vinita Oil, Coal & Gas Co. has been incorporated, with capitalization of \$100,000, for developing coal mines, oil lands, etc. T. K. McGiffin is president.

OKLAHOMA TERRITORY.

El Reno—Water-works.—Dean R. Low of Topeka, Kan.; R. E. Campbell of Oklahoma City, O. T., and E. E. Blake of El Reno have purchased the local water-works, and are reported as to make extensive improvements.

Enid—Produce.—Incorporated: Enid Produce Co., with \$10,000 capital, by Ernest Judge, Harry Way, James Hoyt and Frank Vonstein.

Geary—Water-works.—City is having plans prepared for its proposed water-works. Address "The Mayor."

Guthrie—Asphalt Mining.—A company with a capital stock of \$400,000 has been organized to exploit the asphalt beds of Comanche county, and will erect a plant to cost \$40,000. Dr. Brownup of Utica, N. Y.; O. G. Young of Kansas City, Mo.; Dennis Flynn and Charles E. Billingsley of Guthrie, C. W. Brown of Comanche, O. T.; Stephen Brown of Rush Springs, O. T.; J. C. Robb of Kingfisher, O. T., and C. D. Johnson of Perry, O. T. (all bankers), are the incorporators.

Lawton—Milling.—Chartered: Lawton Milling Co., with \$50,000 capital, by Henry Lassen and C. M. Jackson of El Reno, O. T., and John Bookwalter of Arkansas City, Kan.

Oklahoma City—Mining, etc.—Incorporated: Phoenix Mining & Development Co., with \$1,000,000 capital, by H. M. Whitney of St. Louis, Mo.; C. G. Jones, G. W. Patrick and F. L. and W. P. Conger of Oklahoma City.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Alexandria, La.—Opera-house.—Alexandria Opera-House Co. has been organized, with capital of \$30,000, to build opera-house lately mentioned; J. W. Alexander, president.

Baltimore, Md.—Bank Building.—Provident Savings Bank will erect bank building to cost \$100,000 on a lot 62x94 feet. Jos. E. Sperry of Baltimore and York & Sawyer of New York have been engaged as architects.

Baltimore, Md.—Hotel.—Charles L. Stockhausen has contract to remodel warehouse building into popular hotel at a cost of \$5000. Elevators and bathrooms will be added.

Baltimore, Md.—Storehouse.—City has awarded contract to James W. Arthur at \$29,552 for erection of storehouse.

Baltimore, Md.—Theater.—Lewis H. Becker, 2709 Homewood avenue, is interested in a proposition to remodel building into a theater at a cost of \$15,000.

Baltimore, Md.—Church.—George C. Haskell will prepare plans and specifications for \$12,000 church for Christ Methodist Church.

Baltimore, Md.—Dwellings.—J. C. German has let contract to W. D. Dickinson for erection of seven dwellings to cost \$10,000.

Baltimore, Md.—Dwelling.—W. M. Manly has let contract to John Cowan for remodeling dwelling at a cost of \$5000.

Baton Rouge, La.—Laboratory.—Bids have been invited for erection of two-story-and-basement brick laboratory at the Louisiana State University. About \$25,000 will be expended. Favrot & Livaudais, New Orleans, prepared the plans.

Bay St. Louis, Miss.—Office Building.—Chas. G. Moreau will erect office building. John Henry of Waveland, Miss., is preparing plans and specifications.

Bay St. Louis, Miss.—City Hall.—City proposes issuing \$10,000 in bonds for the erection of a city hall. Address "The Mayor."

Bonham, Texas—Business Building.—Gale Chaney Company will build business structure three stories high, of brick, 73x135 feet, to cost \$15,000. W. A. Peters is the architect in charge. Contracts for construction have been let.*

Catoosa, Md.—Masonic Hall.—William E. Nagle has received contract at \$10,485 for erection of Masonic Hall; structure to be 32x76 feet, two stories, stone and slate, etc.

Charleston, W. Va.—Building.—C. H. Hatcher, Jr., will erect building five stories high. Purpose of structure not stated. Site has been bought at \$7000.

Claiborne, Md.—Hotel.—Claiborne Hotel Co. has incorporated, with capital of \$40,000, to own and operate hotel. Structure is now in course of erection; to be four stories high, 55x224 feet, have 100 sleeping rooms, baths, lighting and water plants, etc.; John Heaver, 408 East North avenue, Baltimore, manager.

Denton, Md.—Jail.—Caroline county contemplates building a jail. Address "County Commissioners."

Elm Grove, W. Va.—Office Building.—Heating, Ventilating & Foundry Co. will erect two-story office building 44x50 feet, stone foundation, slate roof, etc. C. D. McCarty of Wheeling has completed plans and specifications.

Erin, Tenn.—Depot.—Louisville & Nashville Railway will build \$7000 depot; Geo. E. Evans, general manager, Louisville, Ky.

Gadsden, Ala.—Business House.—J. R. Hughes will erect brick business house, two stories, 25x100 feet, plate-glass front, etc.

Gainesville, Ga.—Business Building.—Judge Gaston is planning the erection of a three-story brick business building.

Gulfport, Miss.—Courthouse.—County has accepted plans by Andrew J. Bryan & Co. of Jackson, Miss., for its proposed courthouse; \$50,000 will be available.

Hot Springs, Ark.—Courthouse.—Garland county has designated W. R. Pearson & Sons' Co. of Des Moines, Iowa, to furnish plans and specifications for the courthouse reported last week. Amount available will be \$75,000. Bids will be called for next month. Address "County Commissioners."

Kansas City, Mo.—Business Building.—J. A. Rose has permit to erect \$60,000 business building.

Lake Charles, La.—Mercantile Building.—Kelly, Webber & Co. will erect mercantile building to cost \$20,000; will have fifty feet frontage.

Lake Village, Ark.—Jail.—Chicot county will receive bids until December 1 for erection of the jail mentioned last week. F. B. & W. S. Hull have prepared the plans and specifications. Address Walter Davis et al., commissioners.

Memphis, Tenn.—Depot.—H. E. Hutchins, superintendent Memphis division of Southern Railway, has received the bids for erection of company's proposed \$20,000 freight depot, to be 60x40 feet and be equipped with modern improvements. Contracts will be awarded this week.

Mobile, Ala.—Depot.—Mobile Railway Terminal Co. has organized with Edward L. Russell, president, and Henry Tacon, secretary, to build the proposed railway station. As soon as plans and specifications have been prepared bonds will be issued to cover the cost.

Montgomery, Ala.—Car Barn.—Montgomery Street Railway Co. will build a car barn.

Moundsville, W. Va.—Jail.—Penitentiary directors, J. A. Boyd, treasurer, will ask an appropriation of \$80,000 to be expended for erecting an additional cell building.

Nashville, Tenn.—Warehouse.—American Snuff Co. will erect \$20,000 warehouse 125x150 feet, fireproof, one story high, provided with trolley system for handling hogsheads of tobacco.

New Orleans, La.—Warehouses.—Jerome Hill of Memphis, Tenn., proposes organizing the International Warehouse Co., with capital stock of \$3,000,000, to build warehouses at New Orleans.

Paducah, Ky.—Fraternity Building.—Al Harmash has contract at \$40,439 for construction of fraternity building.

Port Deposit, Md.—Dormitory.—Jacob Tome Institute has let contract to Thomas Seeds of Philadelphia, Pa., for erection of additional dormitory building.

Roland Park, Md.—Cottage.—George Schaeffer will erect \$4000 cottage after plans by A. C. Leach of Baltimore.

Rome, Ga.—Lodge Building.—Rome Lodge of Elks and the Knights Templars will erect a five-story lodge building to cost \$20,000.

Ruston, La.—Warehouse.—Thompson, Richie & Co. and Ruston Hardware Co. will erect warehouse and store building.

Scottsville, Ky.—Courthouse.—Allen county contemplates erecting courthouse to replace building lately burned; will probably expend \$15,000. Address "Allen Fiscal Court."

St. Louis, Mo.—School.—Hiram Lloyd has received contract at \$307,766 for erection of city schoolhouse.

St. Louis, Mo.—Hotel.—J. I. Epstein proposes the erection of a hotel ten stories high, to cost \$750,000.

Sumter, S. C.—Hotel.—Hotel Sumter Co. has accepted plans by C. H. Zeigler, architect, for the proposed improvements to its

hotel. Thirty-three new rooms will be added, steam-heating plant installed, etc.

Tryon, N. C.—Hotel.—Tryon Hotel Co., reported incorporated with \$10,000 capital last week, will build hotel after plans now being prepared by Wm. E. Strong. Contract has not been let.*

Union, S. C.—Church.—First Presbyterian Church will build an edifice to cost \$10,000; Emslie Nicholson, chairman.

Washington, D. C.—Stable.—Christian Henrich will erect stable to cost \$10,000. A. P. Clarke, Jr., prepared the plans and S. J. Prescott & Co. have the contract to erect.

Wilmington, N. C.—Store Buildings.—E. P. Bailey will erect four brick store buildings.

Wilmington, N. C.—Residence.—L. B. Pennington has ordered plans and specifications for residence.

RAILROAD CONSTRUCTION.

Railways.

Alexandria, La.—A. L. Phillips, chief engineer of the proposed railroad to New Orleans, is reported as saying that the line will go down the west bank of the Mississippi river, and that Alexandria will get the branch line from Winnfield to Baton Rouge. Engineers are to make the survey immediately.

Augusta, Ga.—Mr. James U. Jackson, president of the Augusta & Aiken Electric Railway Co., writes the Manufacturers' Record: "We are not contemplating the extension of the Augusta & Aiken Electric Railway to Columbia at present."

Austin, Texas.—The Choctaw, Oklahoma & Gulf Railroad has filed an amendment to its charter for the proposed extension from Amarillo, Texas, to Tecumseh, N. M., to connect with the Rock Island's El Paso line. The extension will be about 125 miles long. F. A. Mollitor is chief engineer, Little Rock, Ark.

Baltimore, Md.—It is reported from Cherry Run, W. Va., that a contract to build the proposed connection sixty-five miles long between the Western Maryland Railroad and the West Virginia Central Railway has been awarded to the Deenger Construction Co. of New York. At the office of Vice-President Landstreet of the Western Maryland it was stated that he had nothing to say about the work.

Baltimore, Md.—The Western Maryland Railroad Co. has begun condemnation proceedings to secure rights of way for its proposed extension from Howardville along Gwynns Falls to reach its new terminal at tidewater in Baltimore. F. S. Landstreet is vice-president and general manager.

Charleston, W. Va.—The West Virginia Southwestern Railway Co. has been chartered, with \$100,000 capital. The incorporators are J. H. Hurt of Abingdon, Va.; W. H. Hughes, L. C. Anderson, W. S. Dangerfield and E. L. Long of Welch, W. Va. The line proposed is to run from Gordon's Siding, in McDowell county, to a point near the headwaters of Tug river; principal office at Bristol, in Washington county.

Chattanooga, Tenn.—Concerning the report that the Chattanooga Southern Railroad proposes to build an extension to Gadsden, Ala., the Manufacturers' Record is officially informed that the company has nothing to announce regarding such a line.

Chicago, Ill.—David Sloan, chief engineer of construction of the Illinois Central Railroad, informs the Manufacturers' Record that he knows nothing about a line to Pensacola being proposed.

Cincinnati, Ohio.—President John Carlisle of the Central Railway of Alabama informs the Manufacturers' Record that forty-one miles of line have been located and deeds secured for the right of way. No work will be done until the entire line is located. Next spring it is expected to invite bids for construction.

Cleburne, Texas—H. R. Seward, locating engineer, and others are making the survey from Hillsboro to Cleburne for the Trinity & Brazos Valley Railroad, in which E. M. House of Austin and others are interested.

Dallas, Texas.—The Hurley Construction Co. has finished its grading and trestle-work on the St. Louis Southwestern's extension from Carrollton to Dallas. It is now grading for the Rock Island from Fort Worth to Dallas.

Denison, Texas.—It is reported that the Missouri, Kansas & Texas Railway Co. has issued orders to rush construction on the first forty miles of the extension from Coalgate, I. T., towards Oklahoma City. S. B. Fisher is chief engineer, St. Louis, Mo.

Douglas, Ga.—The Wadley & Mount Vernon Railroad Co. will, it is stated, immediately complete the line from Brookton to Bar-

row's Bluff. T. J. James is president, Adrian, Ga.

Eagle Lake, Texas.—The Mountain City Construction Co. is building the extension of the Cane Belt Railroad. C. H. Sharman is chief engineer.

Fort Worth, Texas.—The International & Great Northern Railroad has completed its 100-mile extension from Waco into Fort Worth.

Fort Worth, Texas.—The Texas & Pacific Railway is laying its line from Allamore to Stillmore to Vidalia is reported to have begun. F. R. Durden is general manager at Monte.

Geneva, Ala.—Mr. J. J. Morris, president of the Geneva Railroad Co., writes the Manufacturers' Record that the line will be ten miles long. Propositions are being received for the sale of bonds, and it is hoped to soon award the contract.

Guthrie, Okla.—Among the incorporators of the Central Oklahoma Union Depot & Terminal Railway Co., just chartered, are J. C. Robb of Kingfisher and George Thompson and L. M. Thompson of Oklahoma City.

Guthrie, Okla.—The Commercial Club has arranged for the proposed Kansas & Oklahoma Southern, an extension of the Missouri Pacific, to go through Guthrie. The line will extend from Peru Junction to Kirkland, Texas, and a survey has been completed for 150 miles.

Gulfport, Miss.—Chief Engineer Hungerford has begun the survey for the proposed Natchez & Gulf Railroad.

Hagerstown, Md.—It is reported that the Cumberland Valley Railroad will be double-tracked from Hagerstown to Harrisburg, Pa. T. J. Brereton is engineer, Chambersburg, Pa.

Hayneville, Ala.—W. P. McGaugh of Hayneville and others are, it is understood, planning to build a railroad eight miles long from Hayneville to Morganville, on the Louisville & Nashville Railroad.

Huntsville, Ala.—A committee has been appointed to prepare incorporation papers for a company to build the proposed railroad from Huntsville to Oneonta. Among those interested are R. E. Pettus, R. E. Spragins, Capt. Milton Humes, Lawrence Cooper and others.

Jefferson City, Mo.—The Paragould & Memphis Railway Co. has been chartered to build a standard-gauge road from Paragould, Ark., eight miles to the St. Francis river; thence to Cardwell, in Dunklin county, Missouri; thence nine miles to the county line, and thence twenty-nine miles east to Oseola, Ark. Fourteen miles of the line will be in Missouri. The incorporators are John W. Vail, W. H. Niblack, A. T. Vail, S. N. Vail, Dan Sprand and Don Quinn of Decatur, Ind., and E. A. Vail, J. E. Thomas and J. B. Vail of Cardwell, Mo.

Knoxville, Tenn.—President J. H. Ellis is reported as having announced that the company will build the Oliver Springs & Coal Creek branch, starting from Dossets.

Laredo, Texas.—The standard gauging of the Mexican National Railroad has been completed from Monterey to Saltillo, so that 290 miles between Laredo and Saltillo have now been changed. There are still 600 miles to cover between Saltillo and the City of Mexico.

Lexington, Ky.—The Bluegrass Consolidated Traction Co. has begun the survey for its electric line between Versailles and Frankfort. H. C. Beatty and others are interested.

Manatee, Fla.—The grading is nearly all completed six miles south of Manatee for the new railroad. The trolley line has graded its track along the old Manatee avenue.

Melbourne, Ark.—J. B. Baker and others are interested in a plan to build an electric railway twelve miles long from Melbourne to the mouth of Piney.

Mexico, Mex.—Mr. A. J. Peyton of A. J. Peyton & Co., bankers and brokers, writes the Manufacturers' Record that the Morelia & Tacanbaro Railway is to run from Morelia (capital of the State of Michoacan) southwest to Tacanbaro and Ario, and from Morelia northwest to Purnandiro and Irapuato, on the main line of the Mexican Central, with a branch from Purnandiro to La Piedra, on the Guadalajara division of the Mexican Central. It will be standard gauge and about 225 miles long. Engineers are running preliminary locations, and construction is to begin at an early date.

Mexico, Mex.—The Manufacturers' Record is officially informed concerning the report that the Mexican Central Railroad will build from Guitierrez to Durango. It is stated that a location survey is now being made between Sombrerete and Durango. Lewis Kingman is chief engineer, Mexico, Mex.

Mobile, Ala.—The Mobile Railway Terminal Co. has been incorporated to build a new railway terminal. The officers are Edward L. Russell, president; Henry Tacon, secretary; directors, Samuel Spencer, A. B. Andrews, W. W. Finley, James H. Masson, Gregory L. Smith, Charles S. Clarke and Edward L. Russell. Engineers are reported at work on the plan.

Monte, Ga.—Construction on the extension of the Millen & Southwestern Railroad from Stillmore to Vidalia is reported to have begun. F. R. Durden is general manager at Monte.

Monterey, Mexico.—The National Railroad of Mexico will, it is reported, immediately construct the proposed extension from the main line to Matamoras. Two routes have been surveyed, one from Camargo to Salinas, immediately north of Monterey, and the other from Matamoras to Monterey.

Nashville, Tenn.—President Jere Baxter of the Tennessee Central Railroad is reported as announcing that three-quarters of the work on the belt line around Nashville and 65 per cent. of the work on the line from Nashville to Clarksville has been completed. It is reported also that Gustaf Bottiger has resigned as chief engineer of the Tennessee Central and also of the Tennessee Construction Co., which is building the railroad. R. E. Harwood has, it is stated, been appointed chief engineer for the construction company.

Natalbany, La.—The Natalbany & Natchez Railroad Co. may build its proposed line through Amite City.

Ocilla, Ga.—The Brunswick & Birmingham Railroad has, it is reported, done considerable grading on the extension from the Atlantic & Birmingham Railroad to Ocilla. Several hundred hands are employed. L. W. Roberts is chief engineer.

Orange, Texas.—Chief Engineer H. L. Montandon of the Orange & Northwestern Railroad has organized a full engineer corps to begin immediately the survey for the extension from Buna, Texas, to Shreveport, La.

Orangeburg, S. C.—W. G. Smith, president of the Business Men's League, and others are interested in a movement to build a railroad from Orangeburg to Ferguson. Another plan under consideration is to build a line to Neese's, on the Seaboard Air Line.

Pensacola, Fla.—It is announced that the Louisville & Nashville Railroad has purchased the Yellow River Railroad, running from Crestview, Fla., to Floralo, Ala., and will improve it. R. Montfort is chief engineer of the Louisville & Nashville, Louisville, Ky.

Ruston, La.—Concerning the report that the Arkansas Southern Railway will build an extension from Eldorado to Little Rock, Ark., General Manager C. C. Henderson informs the Manufacturers' Record that there is nothing definite yet about the line.

San Antonio, Texas.—W. F. Waters has completed a preliminary survey for the Mexican Central Railway between San Antonio and the Frio river, about fifty miles south. It goes via Somerset, Big Foot, Rossville and Senor.

Savannah, Ga.—The Savannah & Statesboro Railroad Co. has, it is reported, decided to build an extension twenty miles long towards Swainsboro. Cecil Gabbitt is president, Savannah, Ga.

Savannah, Ga.—Plans are being discussed to build a railroad from either Stillwell, Rincon or Myers, on the Seaboard Air Line, to Augusta, making the distance between the two cities about 100 miles.

Sistersville, W. Va.—Robert Miller of Pittsburg, who is interested in the New Martinsville, Sistersville & Middlebourne Electric Railway, is reported as saying that the preliminary work on construction will probably begin on January 1.

St. Louis, Mo.—It is reported that the Missouri Pacific Railway will build the proposed extension from Jefferson City to Springfield if the commercial bodies of those places will meet the company's demands for rights of way and terminal properties. It would connect with the White River extension, now building. H. Rohwer is chief engineer, St. Louis.

St. Louis, Mo.—The Terminal Railroad Association is completing a gravity yard of 1000 cars capacity at East St. Louis.

Tampa, Fla.—It is reported that the J. P. Williams Co. of Savannah, Ga., has taken steps to build a line of railroad from Tallahassee down the west coast of Florida to Tampa. John J. McDonough, president of the Brooksville, Hudson & Tampa Railway Co., is reported to be interested.

Versailles, Ky.—The Louisville & Atlantic Railroad's extension from Miller's Creek to Beattyville is practically completed.

Waldron, Ark.—B. M. Maulding, chief engi-

neer of the Arkansas Western Railroad, has completed a survey from Mena to Hot Springs.

Waycross, Ga.—It is reported that the Atlantic & Birmingham Railroad has completed the grade from Cordele to Montezuma, and will soon begin tracklaying. The survey through to Birmingham is said to be nearly finished. Geo. Dole Wadley is vice-president and general manager, Waycross, Ga.

Weston, W. Va.—Engineers are making a survey for a railroad reported to be an extension of the Wabash to connect Weston with the Little Kanawha Railroad near Glenville. S. D. Brady is chief engineer of the Little Kanawha Railroad at Parkersburg, W. Va.

Wellsburg, W. Va.—The Panhandle Traction Co. has been granted rights of way on Pleasant avenue.

Wheeling, W. Va.—Mr. Howard Hazlett, president of the Panhandle Traction Co., writes the Manufacturers' Record confirming the report that it has applied for a franchise to build a line from Wellsburg to Folksbee. Most of the material for the extension is on the ground, and it is desired to begin construction before winter sets in.

Wichita, Kan.—C. M. Haskell, president of the Muskogee Southern, is reported as saying that the company proposes to build 300 miles of line from Wichita, Kan., to Shreveport, La., via Muskogee, I. T., from which latter point grading has begun south. Contracts for about 190 miles may be let by December 15. D. W. Bolich is chief engineer, Muskogee, I. T. Mr. Haskell's address is Wichita, Ohio.

Winston-Salem, N. C.—George W. Hinshaw is reported as saying that the route for the Stone Mountain Railroad will be located for work to begin April 1 next. It will start a little east of North Wilkesboro, and will run to a point between Top and Pound mountains, where the Tennessee and the Virginia State lines meet. It will cross the Blue Ridge at Grassy Gap with a tunnel 900 feet long. The road will be sixty or sixty-five miles long, and will connect with a line from Abingdon, Va., which will be extended thirty-three miles beyond Abingdon to coal fields.

Street Railways.

Baltimore, Md.—The United Railways & Electric Co. is continuing its Mt. Holly extension towards Dickeyville, about one and one-quarter miles. The work is under contract.

Biloxi, Miss.—The charter of the electric street railway names the directors as follows: E. C. Joulian, A. B. Austin, W. K. M. Duke, W. Gorenflo, Chas. Redding, H. M. Folkes, Chas. Isom, J. H. Miller, A. O. Bourdon, J. M. Bell, John Caraway, J. I. Ford, T. P. Dulion, D. A. Nash, G. A. Swan, J. B. Lemon, T. J. Rosell, W. H. Buck and W. A. White.

Chattanooga, Tenn.—The Chattanooga Rapid Transit Co. has decided to build several extensions.

Concord, N. C.—It is reported that an electric street railway will be built from the Southern Railway depot to Forest Hill.

Gainesville, Texas.—A city council committee has under consideration the application of Thomas M. Bosson for an electric railway franchise. F. H. Carnell, representing a St. Louis syndicate, is also reported to be considering the building of an electric streetcar line in Gainesville.

Greensboro, N. C.—The board of aldermen has granted a franchise to the High Point Electric Railway Co. to build a line in Greensboro. The incorporators are F. W. Darling, George Cohen and D. A. Waters of Philadelphia, and E. D. Steele of High Point, and others. The company proposes to build a line connecting Greensboro, High Point and Winston, and the route, it is said, will be from High Point to Jamestown, thence to Guilford College and into Greensboro.

Louisville, Ky.—The Louisville Railway Co. will, it is reported, build an extension about a mile long on the East Chestnut & Barrett Avenue line.

Louisville, Ky.—The River Road Electric Railway Co. is seeking a franchise for a track on Water street, and also on Third avenue. The line is to extend from Louisville to Prospect.

Natchez, Miss.—The Natchez Electric Street Railway Co. will, it is reported, build an extension south of Main street.

New Orleans, La.—It is reported that the New Orleans Railways Co. will build an extension.

Opelika, Ala.—Mr. Henry D. Capers, secretary and treasurer of the Opelika, Auburn & Lee County Electric & Railway Co., writes to the Manufacturers' Record saying that

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MANUFACTURERS' RECORD.

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Wheeling, W. Va.—The City Railway Co. is receiving material for its new road on Market street between Tenth and Eleventh streets. The rails are 90-pound girder type, and the gauge of the road is four feet eight and one-half inches.

the street railway through Opelika and in Auburn will embrace about nine miles of line. The interurban lines will be about twenty-five miles long, connecting Auburn, Tuskegee and Marvin with Opelika. The officers are: D. T. Hudmon of Opelika, president; Henry D. Capers of Opelika, secretary and treasurer; Frank D. Sweeten of Philadelphia, Pa., electrical engineer; Chauncy Ives of Philadelphia, chief engineer. Mr. Sweeten represents Vallee Bros. & Co. of Philadelphia.

St. Louis, Mo.—James D. Houseman, general manager of the St. Louis, St. Charles & Western Railroad, will, it is understood, apply to the city council for an elevated railroad franchise. He is also interested in a plan to build an electric railway between Moberly and Huntsville, Mo.

Texarkana, Ark.—Work has begun on the new electric street railroad, and six miles are to be completed by April 1 next.

Valdosta, Ga.—The track has been completed on the extension of the electric railway to the Strickland Cotton Mills, and it is to be opened as soon as the electric wires are in position.

Wheeling, W. Va.—The City Railway Co. is receiving material for its new road on Market street between Tenth and Eleventh streets. The rails are 90-pound girder type, and the gauge of the road is four feet eight and one-half inches.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Bank Fixtures.—Farmers' Bank, John A. Horton, cashier, Belton, S. C., will buy safe and other banking office fixtures.

Boiler and Engine.—See "Lumber Plant."
Boiler and Engines.—See "Irrigation Plant."

Boiler, Engine, etc.—Mutual Machine Co., Washington, N. C., is in the market for 10-horse-power horizontal tubular boiler, 10-horse-power vertical or horizontal engine, small jig saw, 20-inch double-head wood-turning lathe, combined punch and shear to punch three-quarters-inch hole in one-half-inch iron and shear $\frac{1}{2} \times 2$ -inch iron, set boilers, rolls five inches, rollers forty-eight inches long, 150-ton hydraulic wheel press to take forty-eight wheels.

Boilers and Engines.—Mutual Machine Co., Washington, N. C., wants to represent makers of marine and stationary boilers and gasoline engines; also of saw-mills, pumps, etc.

Box Manufacturers.—Lowell R. Gaidry, Box 286, New Iberia, La., wants addresses of makers of packing boxes and cases.

Building Equipment.—Tryon Hotel Co., Tryon, N. C., will need lighting and heating plant for hotel.

Building Materials.—Art glass, seats and heating plant will be wanted for \$10,000 church at Lexington, N. C. Wheeler & Runge of Charlotte, N. C., are the architects.

Building Supplies.—Fogle Bros., Winston, N. C., are in the market for cast columns, grille work, papier-mache trimmings and composition capitals; also fire-escapes.

Cement Machinery.—International Builders' Material Manufacturing Co., Norfolk, Va., wants catalogues of cement machinery; also wants to correspond with cement manufacturers.

Cotton Gin.—J. E. McCaleb, Deposit, Ala., will need cotton gin and press.

Cotton Ginnery.—J. Wade Anderson, Laurens, S. C., wants estimates on cost of cotton ginnery.

Cotton Machinery.—Norfolk Yarn Mills, Norfolk, Va., is in the market for Davis & Furber cards and mules; second-hand 48-inch cards will suit.

Cotton Waste.—Geo. L. Neville, 602 Crawford street, Portsmouth, Va., wants to buy 10,000 pounds cotton waste.

Derricks.—Standard Pole & Tie Co., 44 Broad street, New York, wants bids on two

large derricks and three small derricks to be erected at Wilmington, N. C.

Electric-light Plant.—Pearl Roller Mills, Randleman, N. C., wants electric-light equipment for hosiery mill.

Electric-light Plant.—Bethany Improvement Co., care T. E. Crumblett, Bethany, W. Va., will need electric-light plant.

Electric-light Plant.—Standard Pole & Tie Co., main office at 44 Broad street, New York, wants bids on erection of electric-light plant at Brooksville, Fla.

Elevator.—Gale-Chaney Company, Bonham, Texas, will want elevator for business building.

Engine.—A. T. Byrd, Carrsville, Va., wants four to six-horse-power gasoline engine, second-hand in good condition.

Engines.—E. Barnhill, Franklin, Va., wants four or six-horse-power gasoline engine, second-hand.

Excelsior Machinery.—E. O. Painter Fertilizer Co., Jacksonville, Fla., wants addresses of makers of excelsior machinery.

Flour Mill.—Pearl Roller Mills, Randleman, N. C., will need equipment for 80 to 100 barrels of flour capacity.

Foundry Machinery.—See "Boiler, Engine, etc."

Foundrymen.—See "Rolling Mills."

Furniture Factory.—Elias Doar, Summerville, S. C., wants information as to manufacturing furniture; asks estimates on cost of plant for cheap and middle class goods.

Heating Plant.—See "Building Equipment."

Heating Plant.—Elks' Club, Memphis, Tenn., will need heating plant. Chighola & Hauke are the architects.

Heating Plant.—See "Building Materials."

Hoisting Equipment.—Houston & Liggett, Columbia, Texas, are in the market for second-hand hoisting engine, six to ten horse-power; also two sets of derrick trans.

Hoisting Equipment.—Rowan County Freestone Co., Farmers, Ky., is in the market for gravity headgear, 30 incline, load ten tons, size of rope one or one and one-eighth inches; prefer drums in a horizontal plane; length of incline 200 feet.

Hoop Iron.—H. F. Cady Lumber Co., Alexandria, La., will buy a car of hoop iron, No. 12 gauge, black and galvanized, two inches wide, cut to lengths.

Ice Plant.—J. Wade Anderson, Laurens, S. C., wants estimates on cost of ice plant.

Irrigation Plant.—Fresh Water Canal Co., Lake Charles, La., will need boilers, engines and pumps.

Irrigation Plant.—W. H. Junk, president, Dixon, Ill., will buy (for company) irrigation machinery, such as pumps, engines, boilers, etc.

Knitting Machinery.—T. L. Gwyn, Elk Creek, Va., wants estimates on small hosiery plant for 51-needle goods.

Lighting Plant.—See "Building Equipment."

Lime Works.—T. M. Randall, 332 Rawson street, Atlanta, Ga., wants information and prices on materials (fire-brick, sheet metal, rails, drills, boilers, tram cars, etc.) for establishment of lime works.

Lumber.—Schumacher & Boye, Cincinnati, Ohio, will soon be in the market for several carloads of yellow-pine lumber.

Lumber Plant.—C. O. Freeman, Lecompte, La., is in the market for saw-mill outfit, band or circular, to cut 20,000 to 30,000 feet daily; second-hand will do; also wants second-hand narrow-gauge locomotive, nine to twelve tons.

Lumber Plant.—T. G. Watts, Meadow, Ala., is in the market for 50 to 90-horse-power boiler and engine to match, saw-mill to cut 15,000 to 40,000 feet daily; also second-hand pulleys and shafting; also siding and roofing for 60x150 foot house.

Machin Tools.—See "Boiler, Engine, etc."

Machine Tools.—Hyman Supply Co., New Bern, N. C., is in the market for power key-seating machine and power hack-saw machine.

Magnetic Separators.—See "Mining Machinery."

Mining Equipment.—See "Hoisting Equipment."

Mining Equipment.—Walnut Hills Coal & Mining Co., 2849 Stanton avenue, Cincinnati, Ohio, will need rails, screens, bars, drum and fixtures, car drum and wire rope.

Mining Machinery.—J. R. Alsing Co., 75 Guernsey street, Brooklyn, N. Y., wants addresses of makers of magnetic separators for attaching to the feed of machines.

Mining Plant.—Fentress Mining Co., 52 Broadway, New York, will need 20-stamp

mill, air drills, hoisting plant, ore cars, crushers, etc. (Mines in North Carolina.)

Oil-burning Equipment.—Powhatan Clay Manufacturing Co., Richmond, Va., wants information in regard to equipping brick kilns with machinery for burning oil.

Oil Mill.—P. D. Daflin's Son & Co., Savannah, Ga., want information as to designing and contracting for complete cottonseed-oil mill.

Pottery Equipment.—W. H. Young, Columbus, Ga., wants estimates on cost of pottery equipment.

Pulleys, etc.—See "Lumber Plant."

Pulverizer.—Fant Bros., Box 52, Anderson, S. C., are in the market for dry-bone pulverizer to crush bone of natural size to complete powder without the aid of another preparatory breaker, mill or machine.

Pumps.—See "Irrigation Plant."

Railway Equipment.—See "Lumber Plant."

Railway Supplies.—See "Mining Equipment."

Rolling Mills.—John J. Weed, 66 Corcoran Building, Washington, D. C., wants estimates on manufacture of combined curb and conduit.

Roofing, etc.—See "Lumber Plant."

Saw-mills.—See "Boilers and Engines."

Separators (Magnetic).—See "Mining Machinery."

Sewerage System.—City of St. Petersburg, Fla., will open bids December 10 for construction of sewerage system after plans, etc., on file with City Clerk Grant J. Aiken. Work includes 425 feet of 15-inch pipe, 860 feet of 12-inch, 1970 feet of 10-inch, 4220 feet of 8-inch, 5225 feet of 6-inch, 25 manholes and 5 flush tanks. Check for \$200,000 must accompany each bid. J. P. Titcomb is city engineer, and plans are on view at his office.

Soap Machinery.—E. A. Luck, Beaumont, Texas, wants information and prices on soap machinery.

Steam Specialties.—J. N. Payne & Son, Morganton, N. C., want feed-water heater for heating 40-horse-power boiler; second-hand will do.

Telephone System.—Standard Pole & Tie Co., main office at 44 Broad street, New York, wants bids on installation of complete telephone system at Brooksville, Fla.

Water-works.—Bethany Improvement Co., care T. E. Crumblett, Bethany, W. Va., will need pump, etc., for water-works system.

Woodworking Machinery.—See "Boiler, Engine, etc."

TRADE NOTES.

Brewery for Sale.—Zirkle & Moore, Montgomery, Ala., offer a brewery and large ice plant for sale in Montgomery. This may be purchased at a low price, provided quick action is taken.

Death of a Prominent Man.—The Manufacturers' Record learns with regret of the death of Mr. Albert Raymond, president of Raymond Bros. Impact Pulverizer Co., Chicago, Ill., which occurred on November 16.

Sand Brick.—The Egyptian Silica Brick Process Co., Fredericksburg, Va., offers on royalty State and local rights on "sand brick." These are made in any size or color, and are durable and cheap. A plant with a daily capacity of 25,000 brick may be erected at an expense of \$8000.

Fine Mining Equipment.—Crawford & McCrimmon, Brazil, Ind., sold the mining equipment required by the Mt. Marion Coal Mining Co. for its developments near Strawn, Texas. This consisted of boilers, engines, fans, pumps, drums, etc. This equipment is in every respect first-class.

Coffin Factory for Sale.—An up-to-date coffin factory, located close to an ample supply of poplar and white pine, is offered for sale by the Dalton Coffin Co., Box 373, Dalton, Ga. The owner wishes to sell this outright or reorganize and turn the management over to the right party.

Water-Power.—J. H. Hicks, Clarksville, Ga., will put in a stock on property owned by him where 150 horse-power can be readily and cheaply developed for anyone who will establish a woodworking industry on the same. Hardwood is plentiful and labor cheap. This property is 100 yards from rail-way tracks and station.

Investments.—The Cheniere Land & Lumber Co., Exchange Building, Denver, Colo., invites the public to write for its prospectus. This firm owns fine cypress brakes in Louisiana, on which it claims a profit of from 50 to 100 per cent. can be made. Some of the treasury stock of this firm is being sold in

order to complete a large cypress mill now under construction.

Want Enterprises.—The Business Men's League of Brinkley, Ark., offers special inducements to manufacturing enterprises seeking favorable location. Brinkley is especially adapted to the cotton and wood-working industries. Timber is easily accessible and railway facilities for moving outbound finished products are very good.

Brick Machinery.—The "New South" brick-making machinery, manufactured by Messrs. J. C. Steele & Sons of Statesville, N. C., is being widely sold. This firm recently booked an order for a large outfit to go to Tampico, Mexico; also an order for one of the largest outfits to be shipped to Rocky Mount, N. C. Their new automatic end cutter is very satisfactory in operation.

Ball Engines.—The Pennsylvania Railroad Co. recently installed at the Meadows (N. J.) shops a direct-connected unit of 250 horsepower.

The Western Packing Co., Denver, Colo., installed two 100-kilowatt Crocker-Wheeler generators, direct-connected to Ball engines.

The engines for these equipments were built by the Ball Engine Co., Erie, Pa.

New Electric Firm.—W. E. Barr and Claude M. Elam of Greensboro, N. C., have formed a partnership to do all kinds of electrical contracting. This firm will be known as Barr & Elam, electrical contractors, and will carry a carefully-selected line of electric and gas lighting supplies, electric bells, burglar alarms, shades, reflectors, etc. The address will be No. 108 South Davie street, McAdoo Building.

Albany Grease.—The good qualities of Albany grease, the well-known lubricant, are well told in a letter recently received by Adam Cook's Sons, manufacturers, 313 West street, New York city, N. Y., from M. D. Roche, engineer at Caney's granite quarry, Lanesville, Mass. In summing up his experience the writer says: "I find Albany grease durable, clean and cheap, and shall certainly recommend it when placing orders."

Automatic Weighing Machinery.—Richardson Scale Co., Park Row Building, New York, N. Y., has acquired the patent right and good-will of Henry Richardson, Esq., for the United States, and is now prepared to manufacture and sell the Richardson automatic scales in this country. Several thousand of these machines are said to have been sold during the past year in England and other parts of Europe, and are reported to be giving good results. These machines are accurate, durable and simple.

Agents Wanted.—H. G. Barr, Worcester, Mass., manufacturer of sensitive drilling machines, universal grinders and automatic screw slotting, wishes agents to represent and sell these goods for him. This machinery is of first-class workmanship, and already favorably known throughout the country. Mr. Barr has domestic and export lists now ready for his agents. These drilling machines are up to date, strong, powerful and noiseless. They and the rest of this line are capable of a great deal of work.

A Correction.—Under heading "Valuable Opportunity" in these columns in the issue of November 13, referring to the fact that W. B. care Manufacturers' Record, was offering furniture and stove business for sale, it was stated that a yearly profit of \$6,000 had been made out of this business during the past three years, and that the seller of the business would purchase it back at the purchase price in three years. The latter clause was a mistake. The statement should read that the resultant profit in three years (\$18,000) would cover the purchase price of the property.

No Scale.—The New York Continental Jewell Filtration Co., Mills Building, New York, has received a letter from Frank J. Post, North Newark, N. J., in which he says that after ten weeks' use of water softening supplied to him by this company, he finds no new scale forming in his boilers, and the old scale, one-half inch thick, gradually loosening. An order has just been booked for a large gravity type of filter plant to be installed in the Northern Hospital for the Insane, Winnebago, Wis., and also further plants for the Chicago & Eastern Illinois Railroad for the equipment of a filter plant to purify water for boiler use at its Kinmundy (Ill.) station.

Good Southern Business.—H. Stevens' Sons Co., Macon, Ga., manufacturer of sewer and railroad culvert pipe, fire-brick, fire-clay, prepared clay, border brick, traps and branches, is experiencing a deservedly ex-

tensive fall trade. This firm has only recently finished an extensive contract for a sanitary sewerage system for the town of Dothan, Ala., and is now working on similar contracts for Bessemer, Ala.; La Grange, Ga.; St. Petersburg, Fla.; Summerville, suburb of Augusta, Ga.; United States government work for Port Charleston, S. C. H. Stevens' Sons Co. is filling a yearly contract for the city of Charleston, S. C., and is making carload shipments daily to different Southern points.

Sale of Equipment.—F. M. Hicks has received orders during the past week for equipment rebuilt at the Hicks Locomotive and Car Works, 277-285 Dearborn street, Chicago, Ill., as follows: The Crossett Lumber Co., Crossett, Ark., one four-wheel switcher; the Tombstone Consolidated Mines Co., Congress, Ariz., one 55-ton consolidation; the Chicago Heights Land Association, one 17x24 four-wheel switcher; Callahan Bros. & Katz, Shawnee, Okla., one four-wheel switcher and seven box cars, in addition to those previously sold; the Carolina & Northwestern Railroad, two 55-ton consolidations; C. H. Sharp, Pauls Valley, I. T., six box cars, and one private car to E. J. Van Winkle of Des Moines, Iowa.

Westinghouse Motors.—An interesting example of the application of induction motors to the driving of shop machinery is afforded by the plant of Wm. Demuth & Co., Brooklyn, N. Y., manufacturers of tobacco pipes and walking sticks. Power for the factory is furnished by two Westinghouse two-phase compensated-field alternators, driven by Corliss and Ball & Wood engines having a close speed regulation. Excitation is furnished by small multipolar dynamos driven from the main generator shafts. The switchboard contains three panels for generators and feeders. The main power system operates at 220 volts, and all motors are wound for this pressure. Lighting is also supplied from the two-phase mains, special balancing transformers being introduced between the 220-volt leads for the purpose of furnishing a 110-volt three-wire lighting service and equalizing unbalanced loads upon the lighting system. Motive power in the factory is furnished by fourteen Westinghouse Type C induction motors varying in capacity from five to twenty horse-power. The majority of these motors are mounted overhead upon wooden sleepers bolted to the beams of the floor above. They require no care further than an occasional replenishing of the oil wells. Many of the motors operate in an atmosphere heavily laden with wood dust from the woodworking machinery, and are completely covered with this oil-soaked dust, but show no injury therefrom. The motors are belted to short-line shafts, which, in turn, drive various types of belted machinery, including turning and mounting lathes, circular and band saws, buffers, blowers, drill and machine-shop tools. The motors are started at a reduced voltage by means of Westinghouse starting coils, and when near synchronous speed are thrown directly upon the 220-volt system. The power equipment has been in operation for over one year, and has been thoroughly satisfactory in every respect. Westinghouse motors are the product of the Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa.

Mechanical Stokers.—Perhaps the severest character of load encountered in modern steam supply service is that encountered in the operation of steel rolling and slabbing mills. The fluctuations in the demand for steam are not merely of the nature incident to a street-railway load, which is usually considered of maximum severity, but they frequently involve the capacity of the entire plant. In one American steel plant there have recently been put into operation slabbing mills consuming as much as 2000 horsepower during the working of a large steel "bloom." This load is approximately uniform until the "bloom" leaves the rolls, when it instantly decreases to that of mechanical friction only. It is apparent that in order to effectually accommodate these excessive variations in steam supply either a considerable storage capacity must be provided in the boiler equipment, permitting uniform firing, or quick steamer must be employed fired by some form of mechanical stoker. At the present time the latter arrangement is rapidly coming into use, with the result that fluctuating loads are readily anticipated and cared for by control of fuel combustion. This control may be rendered automatic when mechanical draft is employed in connection with the boiler and stoker equipment. A prominent example of this arrangement is offered in the plant of the Lukens Iron & Steel Co., which comprises 5700 horse-power capacity of B. & W. water-tube boilers equipped with Roney im-

proved duplex stokers and a complete mechanical-draft outfit. In this plant the speed of the fans and the position of the flue dampers is automatically controlled by the pressure of steam in the supply main, thus proportioning the rate of combustion to steam demand. In the operation of this plant it has been found unnecessary to operate a signal system between fireroom and slabbing mill, and the heaviest demands for steam are said to be readily provided for by the automatic arrangement for control of draft in connection with the mechanical stokers. It is significant of the high economy and utility of the Roney stoker that it has been adopted in such steel plants as the Carnegie, Lackawanna, Crucible Steel, Jones & Laughlin, Lukens, Phoenix, Trenton, National Tube, American Bridge, Pressed and Standard Steel Car, Illinois, Lorain, Juniata and numerous other steel companies to the extent of 100,000 horse-power. Westinghouse, Church, Kerr & Co., Pittsburgh, Pa., are the makers of Roney stokers.

TRADE LITERATURE.

Rope Calendars.—The Belfast Ropework Co., Ltd., Belfast, Ireland, manufacturer of rope and twine, has issued an attractive desk calendar in gold and black for 1902.

Compliments of The Bourse.—The Bourse, the great machinery mart and exchange of Philadelphia, Pa., is issuing with its best wishes a desk calendar and memorandum book for the new year. This is a useful article, and convenient for the desk. Its cover is embellished by a photographic reproduction of the building occupied by The Bourse.

Rubber Goods.—We are in receipt of an attractive catalogue from New Jersey Car Spring & Rubber Co., Jersey City, covering rubber mats and matting manufactured by this company. This plant is well equipped with improved machinery for manufacturing these goods, and also for manufacturing belting, packing, tubing, etc. Its shipping facilities are perfect, assuring prompt delivery of goods.

Curious Mailing Card.—An unusual mailing card and an effective advertisement is the one received from the De Haven Manufacturing Co., 50-52-54 Columbia Heights, Brooklyn, N. Y., setting forth the good features of De Haven's trojan bale tie. It is difficult to describe this tie without an illustration, and it is suggested that interested parties write for the card. This tie is said to be very economical.

Holiday Suggestions.—An attractive catalogue is the one received from the Electric Supply Co., 40 Drayton street, Savannah, Ga., replete with good illustrations, describing and illustrating an extensive line of novelties. These are intended for the holiday trade, and this book goes forth as a suggestion for the holiday shopper. A Christmas gift from an electrical stock would be an unusual one, and valuable for that reason, as well as the suitability of many of the novelties carried in this firm's stock.

Stack Protection.—A conspicuous part of a manufacturing plant or steamship is its smokestack, and it is important that it should be well protected by paint. To preserve and beautify a stack, a paint must be used capable of withstanding a high degree of heat in combination with exposure to varying atmospheric conditions. The Joseph Dixon Crucible Co., Jersey City, N. J., is the maker of Dixon's silica-graphite paint, which is recommended for painting stacks. The leaflet being mailed by the Dixon Company is interesting and readable.

Good Engines.—Watertown engines are well advertised in the catalogue received from the maker, the Watertown Engine Co., Watertown, N. Y. This book is made of good paper and illustrated with fine photographic and wash-drawing reproductions. It is a clean piece of typographical work. The works of this firm are well arranged for the economical and fast production of good machinery, and this machinery enjoys a deservedly good reputation. For sixty years the Watertown Company has manufactured machinery, from the smallest throttling engine to the most expensive type of compound automatic. Every piece and feature of these engines have been made the subject of especial study, and thousands of dollars have been spent in preparing special tools.

W. J. Cude of Kimmens, Tenn., has purchased and will continue the plant of the Caldwell Lumber Co. at Hohenwald. A tract of 4500 acres of timber land is included in the sale.

GULF & SHIP ISLAND RAILROAD COMPANY.

ANNUAL REPORT FOR THE YEAR ENDED JUNE 30, 1902.

To the Stockholders and Bondholders of the Gulf & Ship Island Railroad Company:

The Board of Directors, in submitting their report for the fiscal year ended June 30, 1902, are pleased to state that the year was one of exceptional prosperity and marked progress in every respect. Industrial conditions throughout Southern Mississippi and the country at large were so good and rates so well maintained that, with the Gulfport terminals still incomplete, gross earnings increased 33 per cent.

INDUSTRIAL DEVELOPMENT.

The railroad traverses one of the finest bodies of long-leaf yellow-pine timber in the country. Lumbering operations are actively in progress, the number of mills now running being approximately 100, with a daily capacity of 3,000,000 feet. Several mills have been erected recently. It is conservatively estimated that no appreciable decrease in the transportation of lumber will be felt for fifteen or twenty years. As the timber lands are cleared the culture of cotton at the northern end of the line is extended, and the movement of this staple is becoming an important feature in the tonnage. The "cotton year" that ended August 31, 1902, shows an increase of about 100 per cent, in the number of bales moved. On the southern end of the line truck farming is proving lucrative, and land is being rapidly cleared for this purpose. The quantity of fertilizers manufactured in the territory or elsewhere and handled over the road is increasing rapidly, reflecting the substantial growth of the farming interests.

Steps have been taken to induce immigration from other parts of the country, particularly the Northwest, and a material increase in the effective agricultural population is anticipated.

Numerous cotton gins, cotton compresses and cottonseed-oil mills are in operation, and additions have been made lately to these establishments. New foundries and machine shops are being erected. Among new industries the manufacture of brick has exceeded all expectations. From an experimental stage six months ago the production of brick has increased until now millions of good building brick are being made, yielding to the railroad satisfactory revenue and incidental benefits in traffic.

GULFPORT HARBOR.

Work on the Gulfport Harbor has made good progress. The ship channel, 22 to 23 feet deep below mean low tide, extending from the anchorage basin to deep water north of Ship Island, about six miles, will be completed about November 1. The contract with the United States Government for the dredging of the channel and the anchorage basin calls for a depth of 19 feet at mean low water. The actual depth, as excavated, will be three or four feet greater than this. The actual width of the channel is 310 feet, or ten feet greater than contract requirements. Alongside the pier the depth of the harbor ultimately will be 25 feet. By November 1 the eastern side of the anchorage basin for a breadth of 600 feet and a length of half a mile adjoining the pier will be ready for use. The width of the basin ultimately will be one-quarter of a mile. It is confidently expected to have the entire basin finished within one year from this time.

The main pier, about one mile in length, and the wharf on the western face of the pier adjoining the anchorage basin, with 23 to 25 feet of water alongside, will also be completed by November 1. The construction of the pier and the wharf is of the most substantial character, considered equal to any in the United States. The pier is filled solid with earth excavated from the basin and channel. All pilings and other timber exposed to salt water are thoroughly creosoted, and should last from 20 to 25 years.

In order to complete the harbor within the specified time, it was decided to build another hydraulic dredge. Most of the necessary machinery is on hand, and the dredge will be ready for operation at an early day.

A contract has been let, for December delivery, for a new steel-bottom tugboat of about 700 horse-power, fully equipped with all the facilities for fire protection for the pier and shipping.

IMPROVEMENTS AT GULFPORT.

Extensive building operations are in progress at Gulfport, in addition to the terminals under construction by your Company. A large three-story hotel, to contain 230 or 235 bedrooms, 50 bath rooms, corridor 40x100 feet, and public rooms to correspond, is well advanced. The hotel will be heated by steam and lighted by electricity. It is believed that the building of this hotel will bring Gulfport into prominence as a winter resort. Work is about to begin on a three-story brick building for the First National Bank and for stores and business offices. Light and power for the hotel, the general offices of the railroad, the bank and the city at large will be furnished by a new electric plant with ample equipment.

Negotiations are in progress between the Gulf & Ship Island and the Louisville & Nashville railroads looking to the erection of a commodious union passenger station.

The citizens of Harrison county have voted to remove the county seat from Mississippi City to Gulfport. A central and adequate plot of land for the new courthouse has been given to the county. The cost of the building will be from \$40,000 to \$50,000.

OFFICE BUILDINGS AND SHOPS.

The Company is erecting at Gulfport a general office building of brick, of mill construction, 54 feet wide by 128 feet long and three stories high. This will afford ample room for all departments.

Several buildings have been added to the car shops at Gulfport during the year, and additional machinery has been supplied. The buildings include a woodworking shop, 60x80 feet; a paint shop, 40x160 feet, with two tracks, and a car shed, 60x300 feet, with three tracks.

Preparations are being made to build at Hattiesburg shops for light running repairs, including a frame machine shop, 40x80 feet; a six-stall roundhouse with a 66-foot turntable, and a water station consisting of a 50,000-gallon tank and two water columns.

ROADWAY BETTERMENTS.

Provision was made early in the year for extensive improvements in the roadbed of the main line, including the reduction of grades, widening of cuts and fills, ballasting of track to standard and laying of new 75-pound steel rails.

Rails in sufficient quantity to lay 25 miles of track have been ordered for delivery in October or November, and enough for 20 miles additional will follow soon afterward.

Plans have been drawn for three metal bridges to replace wooden bridges—one on the Laurel Branch and two on the Columbia Branch.

MILEAGE OWNED AND OPERATED.

	1902.	1901.
Gulfport, Miss., to Jackson, Miss.....	160.50	159.20
Maxie, Miss., to Columbia, Miss.....	48.75	48.00
Saratoga, Miss., to Laurel, Miss.....	41.75	41.00
Total.....	251.00	248.25

Gauge, 4 feet 8½ inches; rails, steel, 56, 60, 65 and 75 pounds.

INCOME.

The gross earnings, operating expenses and taxes, fixed charges, etc., for the year, as compared with the previous year, were as follows:

	1902.	1901.
Gross Earnings.....	\$1,374,684 22	\$1,030,848 77
Operating Expenses and Taxes.....	940,514 28	795,559 90

	1902.	1901.
Net Earnings from Operation.....	\$434,169 94	\$235,288 77
Interest.....	175,311 45	230,742 17

	1902.	1901.
Net Income.....	\$258,858 49	\$4,546 70
Percentage of Operating Expenses and Taxes to Earnings.....	68.42	77.18

The annual interest on the Company's funded debt as it was constituted on June 30, 1902, including all bonds at that time due to be issued on account of construction done, amounts

November 27, 1902.

MANUFACTURERS' RECORD.

361

to \$172,455. This sum is equivalent to 39.72 per cent. of the net earnings applicable to interest in the fiscal year 1902.

Details of the above statement will be found in this report. Comparative figures are given for only two years, as the road was not finished until 1900, and a comparison covering a longer period would not be of value.

Gross earnings, operating expenses, including taxes, and net earnings per mile of road for the last two years were as follows:

	1902.	1901.	Increase.
Gross Earnings.....	\$5,476 83	\$4,152 46	\$1,324 37
Operating Expenses and Taxes.....	3,747 07	3,204 67	542 40
Net Earnings.....	\$1,729 76	\$947 79	\$781 97

The Company's funded debt as it existed on June 30, 1902, amounted to \$13,741 per mile of road. The annual interest charge per mile of road on the funded debt amounts to \$67, as against net earnings available for interest amounting to \$1729 per mile in 1902, \$947 per mile in 1901, and \$1338 per mile as the average of the two years.

The increase in operating expenses is due to increase in traffic; extraordinary expenses in repairing track and bridges because of washouts in the latter part of March and former part of April, 1902; charges representing depreciation accruing on property not yet requiring renewal or replacement, and reserves for other purposes providing for future charges.

FINANCIAL CONDITION.

The financial condition of the Company on June 30, 1902, is shown by the Condensed Balance Sheet. The excess of working assets over working liabilities amounted to \$54,457.49.

Out of the Profit and Loss balance of \$276,774.53, a reserve of 5 per cent., amounting to \$15,350, will be set aside as a guarantee fund for the payment of interest for the ensuing year on the bonds outstanding on June 30, 1902. The net surplus not reserved is \$122,424.53.

CAPITAL STOCK.

The authorized capital stock of the Company is \$5,000,000, all of which is outstanding.

FUNDED DEBT.

To provide for refunding its existing indebtedness, for completion of the Gulfport Harbor, for roadway improvements, for terminal facilities and for additional equipment, the Company executed on February 1, 1902, its First Refunding and Terminal 5 Per Cent. Gold Mortgage to the New York Security & Trust Co. of the City of New York, to secure an issue of bonds amounting to \$5,000,000, at the rate of \$20,000 per mile.

The appropriation of the bonds under this mortgage, Article I, is as follows:

Section 2.—To retire the outstanding issue of First and General Mortgage 5 per cent. bonds.....	\$2,750,000 00
Section 3.—To acquire and complete necessary terminals, including the building of wharves and docks at Gulfport and the dredging of basin and channel.....	750,000 00
Section 4.—To purchase rails and equipment and for construction of bridges, etc.	1,000,000 00
Section 5.—To acquire additional engines and cars.....	500,000 00
Total.....	\$5,000,000 00

Under this mortgage bonds have been issued as follows:

Section 2.—In exchange for First and General Mortgage 5 per cent. bonds retired.....	\$2,734,000 00
Section 3.—In payment for work on docks and wharves and dredging basin and channel to April 1, 1902.....	233,000 00
Section 4.—In payment for rails and improvements to roadway to April 1, 1902.....	54,000 00

Making a total issue to June 30, 1902, of.....

In addition to the above, there had been expended to June 30, 1902, for harbor and road improvements and new equipment the sum of \$362,110.34, on account of which expenditure bonds have been sold, but not issued.

All of the General Mortgage Bonds and all but \$16,000 of the First Mortgage Bonds had been retired on June 30, 1902.

MAINTENANCE OF WAY AND STRUCTURES.

Roadway, bridges and structures were fully maintained out of earnings. The outlays for maintenance of way and structures charged to operating expenses amounted to \$1145.23 per mile of road. The renewals of ties amounted to 110,536, or about 15 per cent. of the total number in the main track.

MAINTENANCE OF EQUIPMENT.

Repairs and renewals of rolling stock were adequate. The amounts charged to operating expenses for maintenance of equipment averaged \$200.96 per locomotive, including hired locomotives kept in repair, and \$951.99 per passenger car. The Company's freight equipment was fully maintained, but the average cost per car cannot be shown, as repairs and re-

CONDENSED BALANCE SHEET AS OF JUNE 30, 1902.		
Cost of Road and Equipment.....	\$8,543,709 85	
Material and Supplies.....	127,717 53	
Total Invested Assets.....	\$8,671,427 38	
Cash in hands of Treasurer.....	\$88,130 76	
Cash in Transit.....	23,494 80	
Cash with Financial Agents.....	64,302 21	
Due from Agents and Conductors.....	12,377 68	
Due from U. S. Government P. O. Department.....	2,625 07	
Accounts Receivable (including proceeds of bonds sold, but not yet delivered).....	363,331 58	
Bills Receivable.....	1,800 00	
Unexpired Insurance.....	4,842 75	
Accrued Income.....	1,707 00	
Total Working Assets.....		
Total Assets.....	\$9,234,039 23	

*This Reserve of \$154,350 for the payment of interest will be set aside in cash upon delivery of bonds sold.

INCOME ACCOUNT FOR THE YEAR ENDED JUNE 30, 1902, AND JUNE 30, 1901.

Gross Earnings:	1902.	1901.	Inc. or Dec.
Freight	\$1,001,597 67	\$816,015 45	Inc. \$275,582 22
Passenger	257,921 22	195,465 79	Inc. 62,455 43
Mail	10,560 62	9,169 80	Inc. 1,390 82
Express	12,604 77	7,469 99	Inc. 5,134 78
Miscellaneous	1,999 94	2,727 74	Dec. 727 80
Total Gross Earnings.....	\$1,374,684 22	\$1,030,848 77	Inc. \$343,835 45
Operating Expenses:			
Maintenance of Way and Structures.....	\$287,452 44	\$210,889 60	Inc. \$76,562 84
Maintenance of Equipment.....	162,923 37	147,586 81	Inc. 15,336 56
Conducting Transportation.....	424,150 83	370,166 69	Inc. 54,024 14
General Expenses.....	47,262 24	54,970 43	Dec. 7,645 19
Total Operating Expenses.....	\$921,828 88	\$783,550 53	Inc. \$138,278 35
Taxes	18,685 40	12,009 37	Inc. 6,676 03
Total Operating Expenses and Taxes.....	\$940,514 28	\$795,559 90	Inc. \$144,954 38
Net Earnings from Operation.....	\$434,169 94	\$235,288 87	Inc. \$198,881 07
Deductions:			
Interest on Funded Debt.....	\$169,145 08	\$227,500 00	Dec. \$58,354 92
Interest on Car Trust Notes.....	1,858 72	2,867 27	Dec. 1,008 55
Other Interest.....	4,307 65	374 90	Inc. 3,932 75
Total Deductions.....	\$175,311 45	\$230,742 17	Dec. \$55,431 72
Net Income.....	\$258,858 49	\$4,546 70	Inc. \$254,311 79
Per cent. of Operating Expenses and Taxes to Earnings	68.42	77.18	Dec. 8.76

ELISHA GEE, Auditor.

PROFIT AND LOSS ACCOUNT TO JUNE 30, 1902.

Credits:			
Balance June 30, 1901.....		\$7,571 94	
Net Income 12 months ended June 30, 1902.....		258,858 49	
Adjustment of Material Accounts.....		15,911 77	
Total Credits.....		\$232,342 20	
Debits:			
Uncollectible Accounts charged off.....		5,567 67	
Balance—Surplus as per Condensed Balance Sheet.....		\$276,774 53	

ELISHA GEE, Auditor.

newals of foreign cars in service on the Company's lines constituted a considerable proportion of the aggregate.

Contracts have been let for six new 10-wheel locomotives, delivery to be made between October, 1902, and February, 1903.

Finding it impossible to make contracts for the early delivery of needed freight cars, the Company decided to build at the Gulfport shops 450 flat and 50 box cars of 30,000 pounds capacity. The construction of this equipment is progressing favorably.

TRAFFIC AND OPERATING RESULTS.

Of the increase of \$343,835 in gross earnings, \$275,582 was derived from freight and \$62,455 from passengers. Freight earnings increased 33.77 per cent., and passenger earnings 21.95 per cent.

Earnings from freight amounted to \$438.99 and from passengers to \$1009.31 per mile of road.

Freight earnings averaged 1.905 cents per ton per mile, and passenger earnings 2.575 cents per passenger per mile.

The average freight-train load was 164.18 tons.

Freight earnings per freight-train mile averaged \$3.12; passenger-train earnings per train-mile averaged 84 cents.

GENERAL REMARKS.

The report of the Auditor, presenting detailed statements of financial condition, earnings, exports, tonnage, miscellaneous statistics, etc., will be found worthy of your attention.

The books and accounts have been audited by Messrs. Patterson, Teele & Dennis, certified public accountants of New York, and their certificate is presented herewith, confirming the statements of the Auditor.

On January 1, 1902, the Gulf & Ship Island Railroad Employees' Hospital Association was formed by your employees. This institution is of great benefit to them. The Association is self-sustaining, and will be able to provide increased facilities for the care of sick and disabled members.

The Company has been free from serious accidents during the year.

The Board acknowledges its obligation to the officers and employees for the faithful performance of service during the year.

By order of the Board,

J. T. JONES.

President.

Gulfport, Miss., October 1, 1902.

Richard T. Lingley, C. P. A.

Rodney S. Dennis, C. P. A.

John Whitmore.

Stuart H. Patterson, C. P. A.

PATTERSON, TEELE & DENNIS,

Certified Public Accountants,

16 S. Calvert Street, Baltimore, Md.

Telephone, 3665 St. Paul.

30 Broad Street, New York.

Telephone, 2255 Broad.

16 E. Broad Street, Columbus, Ohio.

Telephone, 163 Main.

Cable Address, "Dignus."

New York, September 15, 1902.

To the Stockholders and Bondholders of the Gulf & Ship Island Railroad Company:

We have made an examination of the books and accounts of the Gulf & Ship Island Railroad Company for the fiscal year ended June 30, 1902, and hereby certify that the Balance Sheet and Income and Profit and Loss Accounts published herewith are in accordance with the books, and we have satisfied ourselves that they accurately set forth the result of the year's operations and the financial condition as at June 30, 1902.

The charges to Capital Accounts for expenditures during the year are, in our opinion, proper.

All known liabilities have been stated, and provision has been made through Reserve Accounts for contingent liabilities.

Depreciation of Equipment, Rail, Ties and Structures has been provided for out of Income, either by replacement or reserves for the purpose indicated.

All transactions relating to the issue of the new Refunding and Terminal Mortgage Bonds have been carefully examined and found to be in accordance with the terms of the mortgage.

The resultant surplus in Profit and Loss Account at June 30, 1902, has not been affected by the refunding of the old Prior Lien 5 Per Cent. Bonds or the issue of the new Refunding and Terminal Mortgage Bonds, but represents the surplus from operations to June 30, 1902.

Respectfully submitted,

PATTERSON, TEELE & DENNIS,

Certified Public Accountants.

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ELISHA GEE, Auditor.

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FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,

Baltimore, Md., November 25.

At no time during the last six days has the Baltimore stock market been more than moderately active, and toward the close of the period it was positively dull. Both United Railways and Seabards displayed improvements, the former in the income bonds particularly, because of the near approach of the next interest date. Some activity was shown in the bonds of the United Light & Power Co., but Consolidated Gas was quiet. Cotton Duck first mortgage bonds were marked by a rather better tone, and the securities of the G.-B.-S. Brewing Co. continued about steady. The various trust-company stocks gave some manifestations of strength, and the shares of the bonding companies achieved distinct gains. Bank stocks were steady and in demand, as were other investment securities.

In the trading United Railways sold between 13½ and 14, the income bonds rose from 68½ to 69, and the 4 per cents from 94½ to 95½. United Light & Power 4½s were traded in at 84½ and 85. Consolidated Gas sold at 70½ and 71, and the 6 per cent. bonds at 113. Seaboard common started in the sales at 26½ and advanced to 27½, from which there was a reaction to 27, the last sale being at 27½. The preferred, after beginning at 44½, rose to 45%, and reacted to 45. The 4 per cent. bonds sold between \$33½ and \$4, and the 5 per cents between 101½ and 102. Cotton Duck 5s were traded in at 78, G.-B.-S. Brewing common at 123, the income bonds at 37, and the 1sts from 49½ to 50.

In the trust-company group International sold from 142 to 145, Mercantile at 165, and Union Trust at 72 and 73. Fidelity & Deposit advanced from 163 to 165, United States Fidelity from 150 to 152, while American Bonding sold at 85. Maryland Casualty changed hands at 53½ and 54. Bank of Baltimore stock sold at 125, Old Town Bank at 11, Mechanics' at 31½, and Bank of Commerce at 28½.

Other securities traded in were as follows: Alabama Consolidated Coal & Iron preferred, 89; Georgia & Alabama Consolidated 5s, 111 and 112; Northern Central common, 119; Virginia Centuries, 90; Baltimore City 3½s, 1930, 111½; Baltimore City 3½s, 1940, 114½; Consolidation Coal, \$4; Atlantic Coast Line common, 155 and 157; Atlantic Coast Line new 4s, 80½; Savannah, Florida & Western 4s, St. John's river division, 98; Anacostia & Potomac 5s, 99; Security Fire Insurance, 7½; National Enameling, 35½; Nashville Railway 4s, 75½; Nashville Railway 5s, certificates, 77½; Atlanta & Charlotte 1st 7s, 113½; Virginia Midland 2d, 113.

SECURITIES AT BALTIMORE.

Last Quotations for the Six Days Ended November 25, 1902.

Railroad Stocks. Par. Bid. Asked
Georgia Sou. & Fla. 2d Pref. 100 \$1
United Railways & Elec. Co. 50 13½ 14
Seaboard Railway Common. 100 26 27
Seaboard Railway Preferred. 100 44½ 45

Bank Stocks.
Citizens' National Bank..... 10 ... 32½
Commercial & Far. Nat. Bank. 100 135 140
Farmers & Merch. Nat. Bank. 40 ... 70½
First National Bank..... 100 166½ 175
German Bank..... 100 108 ...
Manufacturers' National Bk. 100 100 105
Merchants' National Bank..... 100 100 105
National Bank of Baltimore.... 100 125½ 126
National Bank of Commerce... 15 27½ ...
National Exchange Bank..... 100 194 200

National Howard Bank.....	10	11½	...
National Marine Bank.....	20	37	...
National Mechanics' Bank.....	10	31½	32½
National Union Bank of Md.	100	117	...
Old Town Bank.....	10	11	12
Second National Bank.....	100	187½	...
Third National Bank.....	100	...	133

Trust, Fidelity and Casualty Stocks.

American Bonding & Trust....	50	83	85
Baltimore Trust & Guarantee....	100	312½	325
Continental Trust.....	100	212	...
Fidelity & Deposit.....	100	162½	167½
International Trust.....	100	142	145
Maryland Casualty.....	25	53½	54½
Mercantile Trust & Deposit....	50	164½	169
Union Trust.....	50	72½	73½
U. S. Fidelity & Guaranty....	100	148	152½

Miscellaneous Stocks.

G. B. & S. Brewing Co.	100	12	13
United Elec. L. & P. Pref.	50	38	40
Cotton Duck Voting Trust....	100	7	8
Consolidation Coal.....	100	84	86
George's Creek Coal.....	100	110	116
Consolidated Gas.....	100	70½	71½

Railroad Bonds.

Atlanta & Charlotte 1st 7s, 1907....	113½	...	
Char. Col. & Aug. 1st 5s, 1910....	117	118½	...
Char. Col. & Aug. 2d 7s, 1910....	117	117½	...
Columbia & Greenville 1st 6s, 1914....	122	...	...
Georgia, Car. & North. 1st 5s, 1929....	112½	113	...
Georgia South. & Fla. 1st 5s, 1945....	116	116½	...
Georgia Pacific 1st 6s, 1926....	127	...	...
Petersburg, Class A 5s, 1926....	117½	...	...
Petersburg, Class B 6s, 1926....	126½	...	...
Raleigh & Augusta 1st 6s, 1926....	127½	...	...
Richmond & Danville Gold 6s, 1915....	121½	...	...
Savannah, Fla. & West. 5s, 1934....	115	115½	...
Seaboard & Roanoke 5s, 1926....	122	114	...
Southern Railway Con. 5s, 1934....	118	...	...
Virginia Midland 2d 6s, 1911....	114½	...	...
Virginia Midland 3d 6s, 1916....	118	...	...
Virginia Midland 4d 5s, 1921....	112½	...	...
Virginia Midland 5th 5s, 1926....	114½	116	...
West. North Carolina Con. 6s, 1914....	119	...	...
Wilmington & W. 5s, 1935....	122½	...	...
Charleston City Railway 5s, 1923....	106½	...	...
Charleston Con. Electric 5s, 1969....	99	...	...
Newport News & Old Pt. 5s, 1938....	108½	...	...
United Railways 1st 4s, 1949....	95	...	...
United Railways Inc. 4s, 1949....	68½	68½	...
Seaboard 4s....	83½	84	...
Seaboard 10-year 5s....	101½	102	...

Miscellaneous Bonds.

Mt. V. & Woodby Cot. Duck 5s....	76	78	...
Mt. V. & Woodby Cot. Duck Inc....	33	39	...
G. B. & S. Brewing 1st 3-4s....	49½	50	...
G. B. & S. Brewing 2d Income....	36½	37	...
United Elec. Light & Power 4½s....	84½	85½	...
Consolidated Gas 6s, 1910....	113	...	...
Consolidated Gas 5s, 1939....	114	114½	...

SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending November 25.

Bid. Asked.

Abbeville Cotton Mills (S. C.)....	76	...	...
Aiken Mfg. Co. (S. C.)....	89	92	...
Anderson Cotton Mills (S. C.)....	123	128	...
Arkwright Mills (S. C.)....	115	125	...
Augusta Factory (Ga.)....	62	...	...
Avondale Mills (Ala.)....	85	...	...
Bennettsville Mfg. Co. (S. C.)....	84	...	...
Bibb Mfg. Co. (Ga.)....	111	...	...
Brandon Mills (S. C.)....	95	101	...
Buffalo Cotton Mills (S. C.)....	100	...	...
Buffalo Cotton Mills (S. C.) Pfd....	100	...	...
Cabarrus Cotton Mills (N. C.)....	122	...	...
Chiquila Mfg. Co. (S. C.)....	98	101	...
Clearwater Bleach & Mfg. Co. (Ga.)....	104	...	...
Clifton Mfg. Co. (S. C.)....	174	185	...
Clinton Cotton Mills (S. C.)....	118	...	...
Columbus Cotton Mills (Ga.)....	87	91	...
Courtenay Mfg. Co. (S. C.)....	122	130	...
Dallas Mfg. Co. (Ala.)....	85	...	...
Darlington Mfg. Co. (S. C.)....	88	93	...
Eagle & Phenix Mills (Ga.)....	94	96½	...
Easley Cotton Mills (S. C.)....	95	99	...
Enoree Mfg. Co. (S. C.)....	81	85	...
Enterprise Mfg. Co. (Ga.)....	78	85	...
Exposition Cotton Mills (Ga.)....	151	...	...
Gaffney Mfg. Co. (S. C.)....	91½	94	...
Granby Cotton Mills (S. C.)....	102	...	...
Granby Cotton Mills (S. C.) Pfd....	102	...	...
Granville Mfg. Co. (S. C.)....	150	162½	...
Greenwood Cotton Mills (S. C.)....	103½	105½	...
Grendel Mills (S. C.)....	200	210	...
Hendrietta Mills (N. C.)....	200	210	...
King, John P. Mfg. Co. (Ga.)....	86	...	...
Lancaster Cotton Mills (S. C.)....	100	110	...
Langley Mfg. Co. (S. C.)....	102	106	...
Laurens Cotton Mills (S. C.)....	158	...	...
Lockhart Mills (S. C.)....	100½	103	...
Louise Mills (N. C.)....	101	101	...
Mayo Mills (N. C.)....	140	...	...
McColl Mfg. Co. (S. C.)....	110	...	...
Mills Mfg. Co. (S. C.)....	100	...	...
Mills Mfg. Co. (S. C.) Pfd....	94	...	...
Monaghan Mills (S. C.)....	94	95½	...
Monarch Mills (S. C.)....	...	...	...
Newberry Cotton Mills (S. C.)....	115	...	...
Norris Cotton Mills (S. C.)....	104	110	...
Odeil Mfg. Co. (N. C.)....	100	105½	...
Olympia Cotton Mills (S. C.)....	100	...	...
Olympia Cotton Mills (S. C.) Pfd....	98	...	...
Orangeburg Mfg. Co. (S. C.) Pfd....	102	...	...
Orr Cotton Mills (S. C.)....	101½	...	...
Pacolet Mfg. Co. (S. C.)....	120	200	...
Petzer Mfg. Co. (S. C.)....	165	...	...
Piedmont Mfg. Co. (S. C.)....	160	166	...
Poe, F. W. Mfg. Co. (S. C.)....	132½	...	...
Richland Cotton Mills (S. C.)....	99	99	...
Richland Cotton Mills (S. C.) Pfd....	99	99	...
Roanoke Mills (N. C.)....	100	...	...
Sibley Mfg. Co. (Ga.)....	63	...	...
Southern Cotton Mills (N. C.)....	95	98½	...
Spartan Mills (S. C.)....	134	142	...
Trion Mfg. Co. (Ga.)....	125	140	...
Tucapau Mills (S. C.)....	134	146	...
Union Cotton Mills (S. C.)....	150	...	...
Union Cotton Mills (S. C.) Pfd....	100	102½	...
Victor Mfg. Co. (S. C.)....	115	122	...
Warren Mfg. Co. (S. C.)....	96	99	...
Warren Mfg. Co. (S. C.) Pfd....	106	...	...
Washington Mills (Va.)....	6	...	...
Washington Mills (Va.) Pfd....	108	...	...
Whitney Mfg. Co. (S. C.)....	110	...	...
Wilmington Cot. Mills (N. C.) Pfd....	100	...	...
Wiscasset Mills (N. C.)....	111	117½	...

Railroad Reports.

The annual report of the Charleston & Western Carolina Railway Co. for the fiscal year ended June 30 last shows gross

receipts \$963,760.20, increase \$463.52; operating expenses \$711,238.30, decrease \$19,305.36; net receipts \$252,521.90, increase \$19,768.88; taxes were \$43,200, making the net balance \$200,321.90. The freight earnings were \$689,785.04, and the passenger earnings \$155,650.10. The percentage of operating expenses to gross receipts was 73.8.

The Baltimore & Ohio system reports for October gross earnings \$5,544,973, increase \$220,397; expenses \$3,303,009, increase \$110,008; net earnings \$2,241,964, increase \$110,389. For four months gross earnings \$21,701,789, increase \$1,670,927; expenses \$13,177,019, increase \$1,145,480; net earnings \$8,524,770, increase \$825,447. This includes Baltimore & Ohio, Baltimore & Ohio Southwestern, Ohio River, West Virginia Short Line, Pittsburgh & Western, Pittsburgh, Painsville & Fairport, Pittsburgh, Cleveland & Toledo and Pittsburg Junction railroads.

The Missouri, Kansas & Texas Railway reports for September gross earnings \$3,223,006, increase \$25,573; expenses \$2,101,374, decrease \$49,545; net earnings \$1,121,632, increase \$75,119. For nine months gross earnings \$26,822,585, increase \$18,798; operating expenses \$6,700,200, increase \$6,700,200. The Illinois Central Railroad reports for October gross earnings \$153,184, increase \$31,289; expenses and taxes \$90,423, increase \$2710; net earnings \$47,761, increase \$28,579. For two months gross earnings \$268,428, increase \$61,890; expenses and taxes \$175,198, increase \$11,530; net earnings \$83,230, increase \$50,360.

The National Railroad of Mexico reports for September gross earnings \$808,072, increase \$228,471; expenses \$491,887, increase \$106,322; net earnings \$316,185, increase \$122,149; charges, decrease \$32,719; surplus \$316,185, increase \$154,868. For nine months gross earnings \$6,684,852, increase \$856,611; expenses \$4,392,506, increase \$724,072; net earnings \$2,292,346, increase \$132,539; charges, decrease \$338

